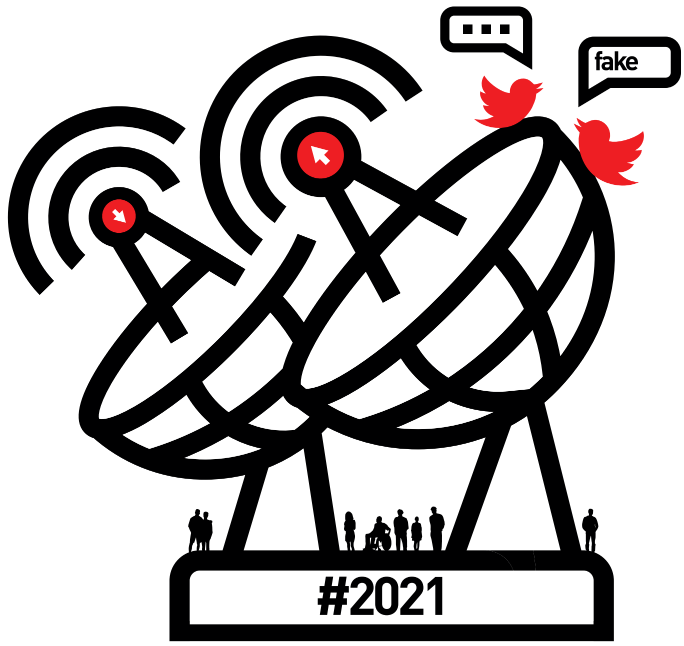
Profesional de la información
The information professional
INTERNATIONAL JOURNAL ON INFORMATION AND COMMUNICATION

e-ISSN 1699-2407
ISSN 1386-6710
CODEN: PINFF2
https://doi.org/10.3145/EPI

EPI

e-ISSN: 1699-2407
2021, v. 30, n. 1



NÚMERO MULTIDISCIPLINAR DE
INFORMACIÓN & COMUNICACIÓN

Letter

Review articles / Artículos de revisión

Research articles / Artículos de investigación

Análisis

07:13 AM - SENDING GOOD NEWS

Profesional de la información

Revista bimestral fundada en 1992 por
Tomàs Baiget y Francisca García-Sicilia

Profesional de la información es una revista de la editorial Ediciones Profesionales de la Información S.L.

NIF: B63664544

Apartado 13 - 24080 León, España

Tel.: +34 - 608 491 521

http://www.elprofesionaldelainformacion.com

Redacción

Profesional de la información

Apartado 13

24080 León, España

Tel.: +34 - 608 491 521

epi@elprofesionaldelainformacion.com

Publicidad

Tel.: +34 - 608 491 521

publici@elprofesionaldelainformacion.com

Suscripciones

Profesional de la información

Apartado 13

24080 León, España

suscripciones@elprofesionaldelainformacion.com

http://www.profesionaldelainformacion.com/suscripciones.html

Servicios online

Roxana Dinu: *roxadinu@gmail.com*

Diseño cubierta

Moisés Mañas
Universitat Politècnica de València

Foto cubierta: Christian Wiediger

Maquetación

Isabel Olea
isabel.iolea@gmail.com

Distribución online

https://revista.profesionaldelainformacion.com/index.php/EPI

Depósito legal: B. 12.303-1997

Los trabajos publicados en EPI son aprobados según el sistema tradicional “peer review” en doble ciego: son revisados al menos por dos expertos en el tema, del Consejo Asesor de la revista y/o externos.

Para conseguir que los trabajos no pierdan actualidad, la dirección y los evaluadores de esta revista ponen especial esfuerzo en revisar los artículos con gran rapidez, consiguiendo un tiempo medio de aceptación o rechazo de los trabajos de sólo unas pocas semanas.

La revista *Profesional de la información* está referenciada en:

BASES DE DATOS

Academic search (Ebsco)
https://www.ebsco.com/products/research-databases/academic-search

Business source (Ebsco)
https://www.ebsco.com/products/research-databases/business-source-complete

CNKI, China National Knowledge Infrastructure
http://scholar.cnki.net/WebPress/brief.aspx?dbcode=SJVD

Communication source (Ebsco)
https://www.ebsco.com/products/research-databases/communication-source

Dialnet (Universidad de La Rioja)
http://dialnet.unirioja.es/servlet/revista?&clave_revista=469

ÍnDICEs CSIC
https://indices.app.csic.es

Inspec, Information services in physics, electronics and computing (IET, The Institution of Engineering and Technology)
http://www.theiet.org/publishing/inspec

ISTA, Information science and technology abstracts (Ebsco)
https://www.ebsco.com/products/research-databases/information-science-technology-abstracts

Journal Citations Reports (JCR) (Clarivate Analytics)
https://clarivate.com/products/journal-citation-reports
Impact Factor 2019 = 1,580 **Q3**

Lisa, Library and information science abstracts (CSA)
http://www.csa.com/factsheets/lisa-set-c.php

Lista, Library, information science & technology abstracts (Ebsco)
http://www.libraryresearch.com

Scopus (Elsevier) Scimago Journal Rank 2019 = 0,480 **Q1**
http://www.scopus.com

Social sciences citation index, Social SCI, WoS (Clarivate Analytics)
http://wokinfo.com/products_tools/multidisciplinary/webofscience/ssci

ÍNDICES

Catálogo de Latindex
http://www.latindex.unam.mx/latindex/ficha?folio=23967

ERIH Plus
https://dbh.nsd.uib.no/publiseringskanaler/erihplus/periodical/info.action?id=449601

ACCESO A LOS TEXTOS COMPLETOS

Academic search complete (2000-)
https://www.ebsco.com/products/research-databases/academic-search

Business source complete (2000-)
https://www.ebsco.com/products/research-databases/business-source-complete

Communication source (2000-)
https://www.ebsco.com/products/research-databases/communication-source

Digitalia Publishing (2011-)
http://www.digitaliapublishing.com

Ebscohost Electronic Journals Service (2000-)
http://ejournals.ebsco.com/direct.asp?JournalID=105302

e-Libro (2011-)
http://www.e-libro.net

El profesional de la información (1992-embargo 3 años)
http://elprofesionaldelainformacion.com/contenidos.html

Informe Académico (2000-)
https://www.cengage.com

Library, information science & technology abstracts with full text (2000-)
http://www.ebscohost.com/thisTopic.php?marketID=1&topicID=584

Recyt (2000-)
http://recyt.fecyt.es/index.php/EPI

Scipedia (2007-)
https://www.scipedia.com/sj/epdli

EPI EN REDES SOCIALES

http://www.facebook.com/elprofesionaldelainformacion
http://twitter.com/revista_EPI
http://www.linkedin.com/company/el-profesional-de-la-informacion-epi-
https://www.instagram.com/revista_epi/

PLATAFORMA DE PRODUCCIÓN OJS

Profesional de la información
https://revista.profesionaldelainformacion.com/index.php/EPI

Sumario

EPI, 2021, v. 30, n. 1

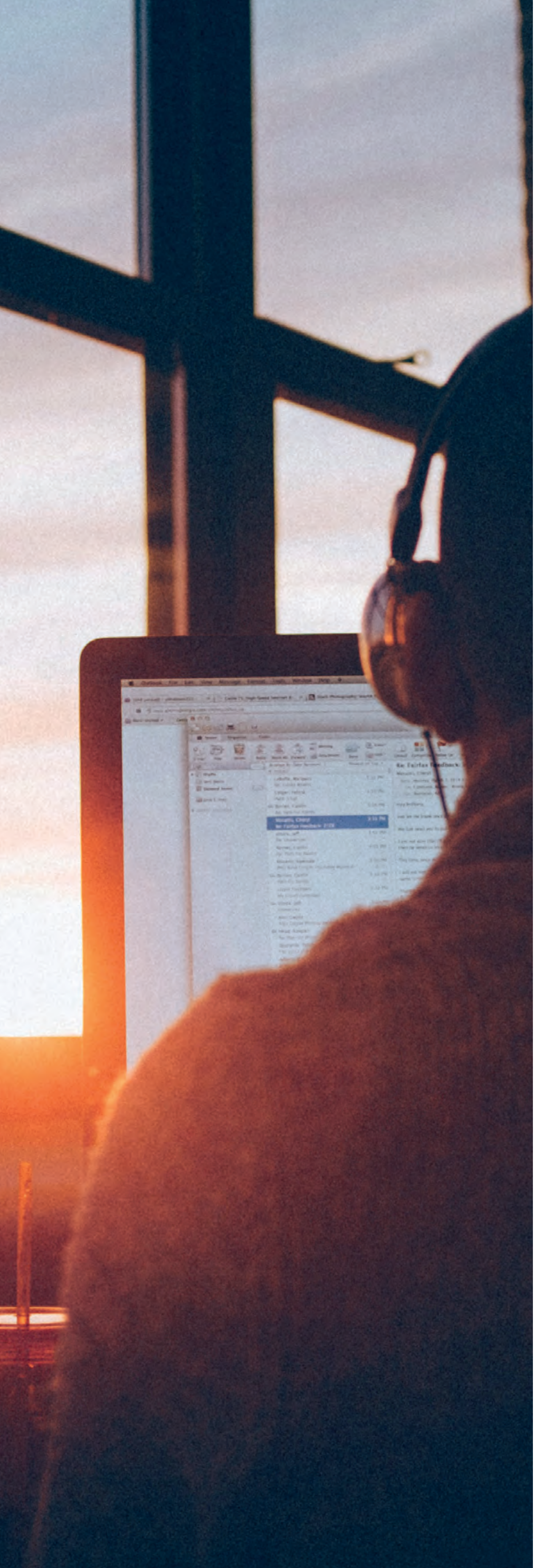
Multidisciplinar
Multidisciplinary

LETTER

REVIEW ARTICLES / ARTÍCULOS DE REVISIÓN

RESEARCH ARTICLES / ARTÍCULOS DE INVESTIGACIÓN

ANALYSIS / ANÁLISIS



agence d'évaluation de la recherche et de l'enseignement supérieur

A proposal to revise the disruption index

Loet Leydesdorff; Alexander Tekles; Lutz Bornmann

How to cite this article:

Leydesdorff, Loet; **Tekles, Alexander**; **Bornmann, Lutz** (2021). "A proposal to revise the disruption index". *Profesional de la información*, v. 30, n. 1, e300121.

https://doi.org/10.3145/epi.2021.ene.21

Letter received on February, 21st 2020

Loet Leydesdorff ✉
https://orcid.org/0000-0002-7835-3098

University of Amsterdam
Amsterdam School of Communication Research (ASCoR)
PO Box 15793
1001 NG Amsterdam, The Netherlands
loet@leydesdorff.net

Alexander Tekles
https://orcid.org/0000-0001-8765-9331

Administrative Headquarters of the Max Planck Society
Science Policy and Strategy Department
alexander.tekles.extern@gv.mpg.de

Ludwig-Maximilians-University Munich, Department of Sociology

Lutz Bornmann
https://orcid.org/0000-0003-0810-7091

Administrative Headquarters of the Max Planck Society
Science Policy and Strategy Department
Hofgartenstr, 8
80539 Munich, Germany
bornmann@gv.mpg.de

Abstract

The disruption index (*DI*) based on bibliographic coupling and uncoupling between a document and its references was first proposed by Funk & Owen-Smith (2017) for citation relations among patents and then adapted for scholarly papers by Wu *et al*. (2019). However, Wu & Wu (2019) argued that this indicator would be inconsistent. We propose revised disruption indices (*DI** and *DI#*) which make the indicator theoretically more robust and consistent. Along similar lines, Chen *et al.* (2020) developed the indicator into two dimensions: disruption and consolidation. We elaborate the improvements in simulations and empirically. The relations between disruption, consolidation, and bibliographic coupling are further specified. Bibliographic coupling of a focal paper with its cited references generates historical continuity. A two-dimensional framework is used to conceptualize discontinuity not as a residual, but a dimension which can further be specified.

Keywords

Disruption; Consolidation; Indicator; Revision; Bibliographic coupling.

1. Introduction

Wu *et al*. (2019) introduced the Disruption index (*DI*) for scholarly citation data, in analogy to the *CD* index proposed by **Funk** & **Owen-Smith** (2017) for studying patent citations. In the latter paper a seemingly complex formula for disruption is provided, as follows:

$$CD_t = \frac{1}{n}\sum_{i=1}^{n}\frac{-2f_{it}b_{it}+f_{it}}{w_{it}}, w_{it} > 0 \qquad (1)$$

where

$$f_{it} = \begin{cases} 1 & \text{if } i \text{ cites the focal patent} \\ 0 & \text{otherwise} \end{cases} \qquad (2)$$

and

$$b_{it} = \begin{cases} 1 & \text{if } i \text{ cites a reference of the focal patent} \\ 0 & \text{otherwise} \end{cases} \qquad (3)$$

Wu *et al*. (2019) rewrote Eq. 1 in a simpler form as follows:

$$DI = \frac{N_F - N_B}{N_F + N_B + N_R} \quad (4)$$

where

- N_B = Number of papers citing both the focal paper (FP) and at least one of its references; the citing papers couple the focal paper bibliographically with its references and would thus indicate "continuity" since they span two "generations" of papers in terms of citations;
- N_F = Number of papers citing exclusively the FP and not one of its references; this set is considered "disruptive" because the citations do not reach historically back to papers cited by FP;
- N_R = Number of papers citing references of FP, but not FP itself.

In other words: documents (patents or papers) can be coupled bibliographically to their own cited references by citing papers (**Kessler**, 1963) and thus indicate historical continuity across "generations" of citations. Alternatively, papers can be unrelated to previously cited research. The generation of continuity by bibliographic coupling can also be considered as a sign of "consolidation" (**Chen** *et al*., 2020). In Eq. 4, for example, $N_F = 0$ and $N_R = 0$ with $N_B > 0$ would mean $DI = -N_B/N_B = -1$ and thus extreme consolidation; vice versa, $N_B = 0$ and $N_R = 0$, while $N_F > 0$ leads to $DI = 1$ and thus extreme disruption. In this model, however, disruption and consolidation are traded-off on a single dimension, while one can also model the two concepts as two independent dimensions.

In the numerator of Eq. 4 (N_F - N_B), the number of papers bibliographically coupling FP with FP's references (N_B) is subtracted from N_F. The difference between the total number of citing papers ($N_F + N_B$) and the value in the numerator of Eq. 4 is $(N_F + N_B) - (N_F - N_B) = 2 * N_B$.[1] One could argue that it would be more parsimonious to subtract N_B only once from the total citations ($N_F + N_B$). One then obtains an indicator DI^* for the disruption, which can be formulated as follows:

$$DI^* = \frac{N_F}{N_F + N_B + N_R} \quad (5)$$

Analogously, one can define an indicator for consolidation $DI^\#$ as follows:

$$DI^\# = \frac{N_B}{N_F + N_B + N_R} \quad (6)$$

DI^* is a measure of disruption and $DI^\#$ a measure of consolidation.

Wu & **Wu** (2019) noted that N_F - N_B can be negative when most of the citations of FP couple FP bibliographically to its references. This leads to a negative value of DI between minus one and zero, indicating that "continuity" prevails as the opposite of disruption. Increases in the value of N_R (other references), however, lead to less disruption if $N_F - N_B > 0$, but enhance disruption when $N_F - N_B < 0$. **Wu** & **Wu** (2019) considered this effect as "inconsistent," and called for a revision of the indicator. Using the absolute values, however, $N_F - N_B$ and $N_B - N_F$ can be measures of both disruption and continuity. The problem can be solved by using DI^* or $DI^\#$ as independent indicators in a two-dimensional model.

2. DI_n: a further extension

Bornmann *et al*. (2020) and **Bornmann** & **Tekles**, (2020) extended DI to DI_n, where n denotes the threshold value for counting the bibliographic couplings between FP and its references in a single citing paper. Only papers which cite n or more references among the cited references of FP are counted in M_B^n, which is used in Eq. 4 instead of N_B. It follows that the original indicator is the same as DI_1. The problem in the background is that DI tends to indicate many papers as close to zero. By adding thresholds, the authors aimed to adjust the indicator in order to focus the indicator on identifying disruptive research (**Bornmann** *et al*., 2020).

A disadvantage of this computational strategy can be that the number of possible indicators proliferates into "families" of indicators (**Bu** *et al*., in press). For example, one can replace N_B with M_B^n in both the numerator and the denominator (Eq. 7) or only in the numerator and keep the denominator constant (Eq. 8).

$$DI_n^a = \left(N_F - M_B^n\right) \Big/ \left(N_F + M_B^n + N_R\right) \quad (7)$$

$$DI_n^b = \left(N_F - M_B^n\right) \Big/ \left(N_F + N_B + N_R\right) \quad (8)$$

Bornmann *et al*. (2020) used Eq. 7. In Eq. 7, the replacement of N_B has an effect on both the numerator and the denominator. In the case of Eq. 8, one keeps the domain in the denominator the same between DI and DI_n. One can thus compare among proportions.

3. An extreme example

An extreme and counter-intuitive case, for example, can be formulated as follows:

> Consider two papers A and B. For paper A: N_F = 10, N_B = 10, and N_R = 100; for paper B: N_F = 10, N_B = 100, and N_R = 10 (see Table 1).

Do these two papers have the same disruption or not? Table 1 explicates the computation for the two papers thus specified. Paper A scores *DI* = 0.0. While *DI* = –0.75 for paper B —an increase of 75 percentage points in the continuity— *DI** is 0.083 for both papers. DI* indicates that the papers have the same level of disruption; DI shows a different level of disruption. However, since *DI* is ≤ 0 for paper A, the difference between the papers is on the consolidation rather than the disruption dimension: both papers are consolidating, but paper B is more consolidating than paper A. This can also be seen when using *DI** and *DI#*: the two papers have the same levels of disruption (*DI**), while the level of consolidation (*DI#*) is different.

The two effects —changes in the values of N_B or N_R— are combined and perhaps confusing in this example. However, one can distinguish the two effects —disruption and consolidation— analytically by using simulations. The ten-times larger value of N_B in the second paper leads to a ten times larger consolidation (*DI#*).

Table 1. *DI*, *DI**, and *DI#* for an extreme case

		A	B
	N_F	10	10
	N_B	10	100
	N_R	100	10
DI	Numerator	0	-90
	Denominator	120	120
	DI	0	-0.75
*DI**	Numerator	10	10
	Denominator	120	120
	*DI**	0.083	0.083
DI#	Numerator	10	100
	Denominator	120	120
	DI#	0.083	0.83

4. Simulations

Let us, for example, focus on the effects of increasing N_B. Given an initial configuration with N_F = 20, N_B = 10, and N_R = 20, we assume the addition of a single citation to N_B at each step from ten to one hundred (Table 2). This makes *DI* increasingly negative. In other words, the continuity increases and *DI* decreases. The numerator of *DI#* increases, while *DI** decreases because of the increase of the denominator. Figure 1 shows the respective curves in the case of a stepwise increase of N_B from ten to one hundred for *DI*, *DI**, and *DI#* .

Both *DI** and *DI#* are by definition positive. As N_B and consequently the bibliographic coupling and *DI#* increase, this seems to be the consolidation indicator, whereas *DI** is the disruption indicator. As noted, *DI* itself is complex since it combines disruption and consolidation in a single dimension.

Table 2. Simulation based on increasing values for N_B, while holding N_F and N_R constant

N(B)	*N(F)*	*N(R)*	*DI*	*DI**	*DI#*
10	20	20	0.200	0.400	0.200
11	20	20	0.176	0.392	0.216
12	20	20	0.154	0.385	0.231
13	20	20	0.132	0.377	0.245
14	20	20	0.111	0.370	0.259
15	20	20	0.091	0.364	0.273
16	20	20	0.071	0.357	0.286
17	20	20	0.053	0.351	0.298
18	20	20	0.034	0.345	0.310
…	…	…	…	…	…
100	20	20	-0.600	0.133	0.733

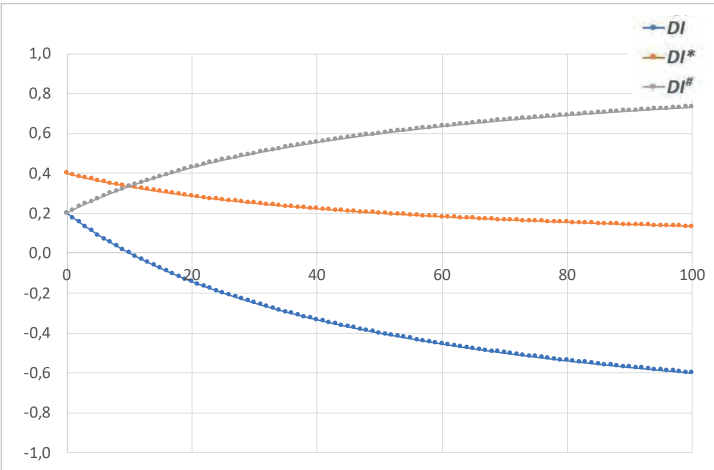


Figure 1. Development of *DI, DI**, and *DI#* with increasing values of N_B

5. Empirical examples

We compare the results for two empirical cases. In the first case, we use the set of **Bornmann** & **Tekles** (2019): that is, 566 papers published in *Scientometrics* between 2000 and 2010 with at least 10 citations and 10 cited references each (**Bornmann** *et al*., 2020). Table 4 shows the top-20 lists for *DI*, *DI**, *DI#*, and DI_5. The paper by **Heinze** *et al*. (2007) is listed at the first position in three of the four lists in Table 4; followed by **Glänzel** *et al*. (2003) in two of the four lists. However, **Glänzel** *et al*. (2003) is only on the tenth position using *DI* for the measurement. Both papers focus on the institutional conditions of creativity, novelty production, and disruption. In our opinion, since both papers are a bit programmatic, high disruption values can be expected.

Table 4. Rank-ordering of the top-20 papers in the sample of 566 papers published between 2000 and 2010 in *Scientometrics* using *DI*, *DI**, *DI*[#], and DI_5.

	DI		***DI****		***DIi***[#]		DI_5
Heinze T, 2007, V70, P125	0.182	Heinze T, 2007, V70, P125	0.205	Glänzel W, 2003, V58, P571	0.125	Heinze T, 2007, V70, P125	0.205
Bordons M, 2002, V53, P195	0.138	Glänzel W, 2003, V58, P571	0.171	Bar-Ilan J, 2004, V59, P391	0.117	Glänzel W, 2003, V58, P571	0.171
Chiu WT, 2004, V61, P69	0.107	Bordons M, 2002, V53, P195	0.165	Burrell QL, 2005, V65, P381	0.109	Bordons M, 2002, V53, P195	0.165
Patra SK, 2006, V67, P477	0.106	Archambault E, 2006, V68, P329	0.149	Prpic K, 2002, V55, P27	0.102	Archambault E, 2006, V68, P329	0.149
Boshoff N, 2009, V81, P413	0.064	Glänzel W, 2002, V53, P171	0.116	Archambault E, 2006, V68, P329	0.101	Glänzel W, 2002, V53, P171	0.116
Van Eck NJ, 2010, V84, P523	0.063	Van Eck NJ, 2010, V84, P523	0.114	Schloegl C, 2010, V82, P567	0.093	Van Eck NJ, 2010, V84, P523	0.114
Glänzel W, 2002, V53, P171	0.063	Chiu WT, 2004, V61, P69	0.114	Burrell QL, 2002, V53, P309	0.089	Chiu WT, 2004, V61, P69	0.114
Van Raan AFJ, 2005, V62, P133	0.056	Patra SK, 2006, V67, P477	0.106	Porter AL, 2007, V72, P117	0.088	Patra SK, 2006, V67, P477	0.106
Archambault E, 2006, V68, P329	0.047	Van Raan AFJ, 2005, V62, P133	0.094	Burrell QL, 2001, V52, P3	0.073	Van Raan AFJ, 2005, V62, P133	0.094
Glänzel W, 2003, V58, P571	0.046	Ren SL, 2002, V53, P389	0.093	Schummer J, 2004, V59, P425	0.070	Ren SL, 2002, V53, P389	0.093
Weingart P, 2005, V62, P117	0.044	Nederhof AJ, 2006, V66, P81	0.079	Uzun A, 2004, V61, P457	0.068	Nederhof AJ, 2006, V66, P81	0.079
Keiser J, 2005, V62, P351	0.043	Boshoff N, 2009, V81, P413	0.079	Hagen NT, 2010, V84, P785	0.067	Boshoff N, 2009, V81, P413	0.079
Hsieh WH, 2004, V60, P205	0.040	Rinia EJ, 2001, V51, P293	0.076	Porter AL, 2009, V81, P719	0.066	Rinia EJ, 2001, V51, P293	0.076
Rinia EJ, 2001, V51, P293	0.038	Weingart P, 2005, V62, P117	0.071	Boyack KW, 2005, V64, P351	0.066	Weingart P, 2005, V62, P117	0.071
Glänzel W, 2006, V67, P67	0.036	Porter AL, 2007, V72, P117	0.067	Vaughan L, 2006, V67, P291	0.065	Porter AL, 2007, V72, P117	0.067
Liu CY, 2010, V82, P21	0.034	Glänzel W, 2006, V67, P67	0.062	Nederhof AJ, 2006, V66, P81	0.064	Glänzel W, 2006, V67, P67	0.062
Larsen PO, 2010, V84, P575	0.034	Boyack KW, 2005, V64, P351	0.059	Lewison G, 2005, V63, P341	0.063	Boyack KW, 2005, V64, P351	0.059
Tijssen RJW, 2002, V54, P381	0.034	Keiser J, 2005, V62, P351	0.058	Bordons M, 2003, V57, P159	0.063	Keiser J, 2005, V62, P351	0.058
Ren SL, 2002, V53, P389	0.032	Bornmann L, 2006, V68, P427	0.058	Ren SL, 2002, V53, P389	0.061	Bornmann L, 2006, V68, P427	0.058
Lewison G, 2001, V52, P29	0.029	Tijssen RJW, 2002, V54, P381	0.057	Glänzel W, 2002, V53, P171	0.054	Tijssen RJW, 2002, V54, P381	0.057

Table 5. Rank-ordering of the top-20 papers in the sample of 9,251 papers published between 2000 and 2010 in *Nature* using *DI*, *DI**, *DI*[#], and DI_5.

	DI		***DI****		***DI***[#]		DI_5
Chen G, 2000, V407, P361	0.609	Chen G, 2000, V407, P361	0.670	Tegus O, 2002, V415, P150	0.346	Chen G, 2000, V407, P361	0.669
Myers N, 2000, V403, P853	0.543	Myers N, 2000, V403, P853	0.607	Aoki D, 2001, V413, P613	0.285	Myers N, 2000, V403, P853	0.605
Poizot P, 2000, V407, P496	0.523	Poizot P, 2000, V407, P496	0.598	Calvi L, 2003, V425, P841	0.244	Poizot P, 2000, V407, P496	0.598
Erlebacher J, 2001, V410, P450	0.347	Erlebacher J, 2001, V410, P450	0.481	Khriachtchev L, 2000, V406, P874	0.238	Erlebacher J, 2001, V410, P450	0.477
Bertotti B, 2003, V425, P374	0.325	Bertotti B, 2003, V425, P374	0.419	Parish M, 2003, V426, P162	0.236	Bertotti B, 2003, V425, P374	0.419
Saito Y, 2004, V432, P84	0.310	Forterre Y, 2005, V433, P421	0.395	Stone EC, 2008, V454, P71	0.229	Forterre Y, 2005, V433, P421	0.392
Forterre Y, 2005, V433, P421	0.300	Ernst M, 2002, V415, P429	0.379	Day J, 2007, V450, P853	0.224	Ernst M, 2002, V415, P429	0.378
White S, 2001, V409, P794	0.270	Saito Y, 2004, V432, P84	0.373	Rong H, 2005, V433, P725	0.223	Saito Y, 2004, V432, P84	0.372
Marescaux J, 2001, V413, P379	0.257	Strukov DB, 2008, V453, P80	0.338	Barland S, 2002, V419, P699	0.223	White S, 2001, V409, P794	0.334
Strukov DB, 2008, V453, P80	0.236	White S, 2001, V409, P794	0.337	Tschop M, 2000, V407, P908	0.221	Strukov DB, 2008, V453, P80	0.334
Margulies M, 2005, V437, P376	0.231	Marescaux J, 2001, V413, P379	0.319	Coles H, 2005, V436, P997	0.217	Marescaux J, 2001, V413, P379	0.315
Moss RH, 2010, V463, P747	0.227	James C, 2005, V434, P1144	0.309	Porath D, 2000, V403, P635	0.216	Steele B, 2001, V414, P345	0.302
Steele B, 2001, V414, P345	0.226	Greffet J, 2002, V416, P61	0.306	Loll B, 2005, V438, P1040	0.213	James C, 2005, V434, P1144	0.301
Magurran A, 2003, V422, P714	0.225	Steele B, 2001, V414, P345	0.302	Niemela J, 2000, V404, P837	0.202	Greffet J, 2002, V416, P61	0.301
Rost S, 2004, V427, P537	0.216	Rost S, 2004, V427, P537	0.298	Donnelly C, 2006, V439, P843	0.201	Rost S, 2004, V427, P537	0.294
Ernst M, 2002, V415, P429	0.212	Tomita M, 2003, V421, P517	0.291	Ritz T, 2004, V429, P177	0.197	Armand M, 2008, V451, P652	0.290
Cortright R, 2002, V418, P964	0.211	Gomes R, 2005, V435, P466	0.291	Takasaki T, 2000, V403, P913	0.193	Tomita M, 2003, V421, P517	0.287
Davies H, 2002, V417, P949	0.208	Armand M, 2008, V451, P652	0.290	Greiner M, 2002, V415, P39	0.192	Gomes R, 2005, V435, P466	0.284
Day P, 2003, V425, P817	0.207	Day P, 2003, V425, P817	0.277	Shelly DR, 2007, V446, P305	0.192	Magurran A, 2003, V422, P714	0.274
Reibold M, 2006, V444, P286	0.203	Corma A, 2001, V412, P423	0.275	Hu D, 2009, V461, P640	0.191	Day P, 2003, V425, P817	0.273

In the second example, we selected *Nature* papers with at least 10 citations and 10 cited references each (with N = 9,251 papers). Table 5 shows the top-20 lists for *DI*, *DI**, *DI*[#], and DI_5. The comparison of Table 5 with Table 4 reveals that the disruption values in Table 5 are significantly higher than the values in Table 4: the highest values in Table 4 are on the level as the lowest values in Table 5. The comparably high values for *Nature* papers are expectable, since it is the mission of the journal to publish the

> "finest peer-reviewed research in all fields of science and technology on the basis of its originality, importance, interdisciplinary interest, timeliness, accessibility, elegance and surprising conclusions"
> *https://www.nature.com/nature/about*

Table 6a (columns a to d). Correlations among *DI*, *DI**, *DI#*, and DI_5 in the study of 566 papers in *Scientometrics* during the period 2000-2010. Lower triangle: Spearman rank-order correlations; upper triangle: Pearson correlations. All correlations are statistically significant at the 1%-level.
Table 6b (columns f to i). Correlations among *DI*, *DI**, *DI#*, and DI_5 in the study of 9,251 papers in *Nature* during the period 2000-2010. Lower triangle: Spearman rank-order correlations; upper triangle: Pearson correlations. All correlations are statistically significant at the 1%-level.

Correlations *Scientometrics*					Correlations *Nature*			
DI (a)	***DI**** (b)	***DI#*** (c)	***DI_5*** (d)	(e)	***DI*** (f)	***DI**** (g)	***DI#*** (h)	***DI_5*** (i)
1	.636	-.301	.699	***DI***	1	.525	-.408	.636
.217	1	.544	.986	***DI****	.525	1	.563	.976
-.443	.680	1	.458	***DI#***	-.408	.563	1	.429
.386	.918	.485	1	***DI_5***	.636	.976	.429	1

These correlation matrices are not so different when compared among both tables. For example, *DI#* is always negatively correlated with *DI*. Unlike *DI*, *Di**, and DI_5, *DI#* is exclusively an indicator of consolidation, whereas *DI** is a disruption indicator. Despite the high correlations between *DI** and *DI* (r > 0.9), the zero-hypothesis that the median of these two distributions is the same, is rejected using the Related Samples Wilcoxon Signed Rank Test at the 5% level. None of the *DI#* top papers occurs in the top papers for the other indicators and vice versa.

5. Conclusions and discussion

Following **Chen** *et al.* (2020), we have taken the two dimensions of disruption and continuity or consolidation apart. *DI* can be considered as a continuity indicator more than a disruption indicator since the operation is grounded in bibliographic coupling. The bibliographic coupling of a focal paper to its references generates a representation of continuity. From this perspective, discontinuity is indicated when the bibliographic coupling is not sufficiently generating continuity. This is analogous to the graphical representations that one can make with programs such as *HistCite*™ (**Garfield** *et al*., 2003) or *CitNetExplorer* (**Van Eck**; **Waltman**, 2014). One sees the lines of continuity along trajectories. Discontinuities are inferred where the lines are interrupted. However, the semantics of using two words for a single indicator with opposite sign can be confusing.

In our opinion, the choice for parameters should be legitimated by theoretical reasoning. The subtraction of N_B for a second time, for example, may not be necessary to detect disruptive papers and —as shown by **Wu** & **Wu** (2019)— can lead to confusion in the results. The revised indicators *DI**and *DI#* solve these problems and simplify both the computation and the semantics.

It may appear that this issue concerns a detail, since in many cases the values of *DI** and *DI* will be approximately the same. For analytical reasons, however, *DI** ≥ *DI*. *DI* adds to bibliographic coupling —a theoretical instrument in bibliometrics— by focusing specifically on the couplings and un-couplings between a paper and its references. In a follow-up paper, we envisage to discuss disruption in relation to critical transitions in a time-series of events (cf. **Leydesdorff** *et al.* 2018; **Leydesdorff**, 1991). Both measures (disruption and critical transition) seek to analyze change at the level of the system. While preparing that paper, we stumbled into the problems of semantics and operationalization that we hope to have clarified with this more methodologically oriented paper.

6. Note

1. This value explains the number two in Eq. 1 which can be made more visible by rewriting the equation as follows:

$$CD_t = \frac{1}{n}\sum_{i=1}^{n}\frac{f_{it}(1-2b_{it})}{w_{it}}, w_{it} > 0$$

7. References

Bornmann, Lutz; **Devarakonda, Sitaram**; **Tekles, Alexander**; **Chacko, George** (2020). "Disruptive papers published in *Scientometrics*: Meaningful results by using an improved variant of the disruption index originally proposed by Wu, Wang, and Evans (2019)". *Scientometrics*, v. 123, pp. 1149-1155.
https://doi.org/10.1007/s11192-020-03406-8

Bornmann, Lutz; **Tekles, Alexander** (2019). "Disruptive papers published in *Scientometrics*". *Scientometrics*, v. 120, pp. 331-336.
https://doi.org/10.1007/s11192-019-03113-z

Bornmann, Lutz; **Tekles, Alexander** (2020). "Convergent validity of several indicators measuring disruptiveness with milestone assignments to physics papers by experts", *arXiv:2006.10606*.
https://arxiv.org/abs/2006.10606

Bu, Yi; **Waltman, Ludo**; **Huang, Yong** (in press). "A multidimensional framework for characterizing the citation impact of scientific publications". *Quantitative science studies*.
https://www.mitpressjournals.org/doi/abs/10.1162/qss_a_00109

Chen, Jiyao; **Shao, Diana**; **Fan, Shaokun** (2020). "Destabilization and consolidation: Conceptualizing, measuring, and validating the dual characteristics of technology". *Research policy*, v. 50, n. 1, art. 104115.
https://doi.org/10.1016/j.respol.2020.104115

Funk, Russell J.; **Owen-Smith, Jason** (2017). "A dynamic network measure of technological change". *Management science*, v. 63, n. 3, pp. 791-817.
https://doi.org/10.1287/mnsc.2015.2366

Garfield, Eugene; **Pudovkin, Alexander I.**; **Istomin, Vladimir S.** (2003). "Why do we need algorithmic historiography?". *Journal of the American Society for Information Science and Technology*, v. 54, n. 5, pp. 400-412.
https://doi.org/10.1002/asi.10226

Glänzel, Wolfgang; **Schlemmer, Balázs**; **Thijs, Bart** (2003). "Better late than never? On the chance to become highly cited only beyond the standard bibliometric time horizon". *Scientometrics*, v. 58, n. 3, pp. 571-586.
https://doi.org/10.1023/B:SCIE.0000006881.30700.ea

Heinze, Thomas; **Shapira, Philip**; **Senker, Jacqueline**; **Kuhlmann, Stefan** (2007). "Identifying creative research accomplishments: Methodology and results for nanotechnology and human genetics". *Scientometrics*, v. 70, n. 1, pp. 125-152.
https://doi.org/10.1007/s11192-007-0108-6

Kessler, Myer-Mike (1963). "Bibliographic coupling between scientific papers". *American documentation*, v. 14, n. 1, pp. 10-25.
https://doi.org/10.1002/asi.5090140103

Leydesdorff, Loet (1991). "The static and dynamic analysis of network data using information theory". *Social networks*, v. 13, n. 4, pp. 301-345.
https://doi.org/10.1016/0378-8733(91)90001-A

Leydesdorff, Loet; **Wagner, Caroline S.**; **Bornmann, Lutz** (2018). "Discontinuities in citation relations among journals: Self-organized criticality as a model of scientific revolutions and change". *Scientometrics*, v. 116, n. 1, pp. 623-644.
https://doi.org/10.1007/s11192-018-2734-6

Tahamtan, Iman; **Bornmann, Lutz** (2018). "Creativity in science and the link to cited references: Is the creative potential of papers reflected in their cited references?". *Journal of informetrics*, v. 12, n. 3, pp. 906-930.
https://doi.org/10.1016/j.joi.2018.07.005

Van Eck, Nees-Jan; **Waltman, Ludo** (2014). "CitNetExplorer: A new software tool for analyzing and visualizing citation networks". *Journal of informetrics*, v. 8, n. 4, pp. 802-823.
https://doi.org/10.1016/j.joi.2014.07.006

Wu, Lingfei; **Wang, Dashun**; **Evans, James A.** (2019). "Large teams develop and small teams disrupt science and technology". *Nature*, v. 566, n. 7744, pp. 378-382.
https://doi.org/10.1038/s41586-019-0941-9

Wu, Shijie; **Wu, Qiang** (2019). "A confusing definition of disruption". *SocArxiv Papers*.
https://osf.io/preprints/socarxiv/d3wpk

On the '*grand narrative*' of media and mass communication theory and research: a review

Mark Deuze

Nota: Este artículo se puede leer en español en:
http://www.profesionaldelainformacion.com/contenidos/2021/ene/deuze_espanol.pdf

How to cite this article:

Deuze, Mark (2021). "On the '*grand narrative*' of media and mass communication theory and research: a review". *Profesional de la información*, v. 30, n. 1, e300105.

https://doi.org/10.3145/epi.2021.ene.05

Invited manuscript received on December 18th, 2020

Mark Deuze
https://orcid.org/0000-0002-1986-5050

University of Amsterdam, Media Studies
Turfdraagsterpad 9
1012XT Amsterdam, The Netherlands
M.J.P.Deuze@uva.nl

Abstract

This paper offers a genealogy of the field of mass media and communication theory and research, with the purpose of distilling a *grand narrative* of media studies and communication science. Such a 'story of stories' is articulated with recurring concerns over the categories and taxonomies of the communication process, the rapid development and penetration of new information and communication technologies, and attempts by scholars around the world to respond to our increasingly complex and convergent media environment. In conclusion, an argument is developed for a *vital*, *creative*, and *public* way forward for the field.

Keywords

Communication; Mass media; Media environment; Theory; Research; Communication process; New information and communication technologies; ICT.

1. Introduction

Throughout the history of (mass) media studies and mass communication research, claims have been made that 'mass' media and communication are concepts that do not fit the contemporary media environment (anymore). Such observations about 'cracks' in the foundations of the field (**Chaffe**; **Metzger**, 2001, p. 369) and subsequent calls for 'paradigm shifts' (**Reardon**; **Rogers**, 1988, p. 297) are generally inspired by technological advances. More fundamentally, the field has been lamented for its "diversity and creative chaos" (**Calhoun**, 2011, p. 1482) or "extraordinary pluralism" (**Fuchs**; **Qiu**, 2018, p. 220), leading **Waisbord** (2019a) to label it as a 'post-discipline' as it not only lacks ontological unity (or unifying Big Theory) but cannot even agree on the subject it purports to study: Is it media? Mass media? Communication, or just mass communication? And what are media? Is not everything communication? When is a large group of people a mass? In short, the scholarly investigation and teaching of (mass) media and communication seem to be a mess, and for the longest time have been.

Instead of defending or abandoning a broad range of continuously bifurcating definitions, theories, and methods, the purpose of this paper is to return to a fundamental 'grand narrative' of the discipline: a meta-narrative offering a connection between an enormous variety of ideas and ideals, approaches and frameworks, disci-

> The scholarly investigation and teaching of (mass) media and communication seem to be a mess, and for the longest time have been

plinary legacies, and conceptual innovations, all in what **Bauman** (2005, p. 33) calls the 'permanently impermanent' context of contemporary society and technology relationships. Please note that I am most certainly not advocating a disciplining move to 'reign in' the ongoing differentiation of media studies and communication science. My aim is to take up **Waisbord'**s (2019a; 2019b) challenge to articulate the field with a common interest and understanding in addressing contemporary challenges related to the media and all forms of mediated communication, historically grounded and empirically supported. In doing so, I am inspired by **Livingstone** (2011) to highlight the ways in which the various parts that make up our field are connected, in the process identifying where the expertise and specific knowledges and arguments of the discipline lie. In doing so, I hope to tell the story of the field – a story about stories, really: the stories that students and scholars in the field of media and mass communication tell themselves and each other about *what* they are doing, *how* they are doing it, and *why* this matters.

Denis McQuail during a conference in 2015
https://cutt.ly/cjmRMsc

Using as a basis the work, pursued over a ten-year period, on updating a new edition of the late Denis McQuail's (1935-2017) seminal handbook of the field (**McQuail**; **Deuze**, 2020), this story does not only intend to explain what the field understands the societal role of media and mass communication to be, but also to underpin the work being done by media and mass communication scholars, regardless of disciplinary background, theoretical lineage, and methodological preference. It is, in a way, an attempt to 'tie the room together' (paraphrasing the character Jeffrey Lebowski in the 1998 movie *The Big Lebowski*).

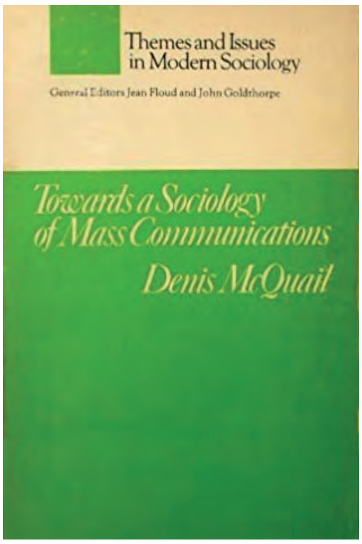
What makes McQuail's *Media and Mass Communication Theory* stand out from most other impressive and comprehensive textbooks, are three things:

First, Denis McQuail was among the very first academics to consider and later define mass communications as a boundaried scholarly field of study.

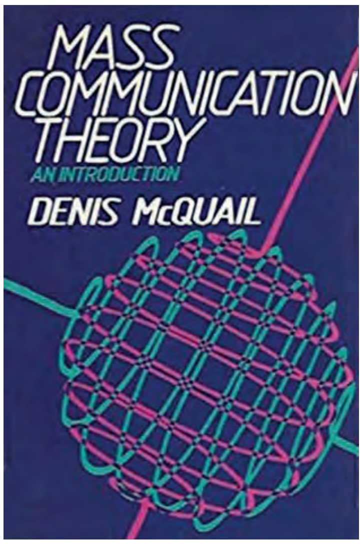
In 1969, just two years after completing his PhD at *Leeds University*, he published *Towards a Sociology of Mass Communications*, still articulating the study of (mass) media and communication with sociological themes and issues. In 1983, he followed this work up with the first edition of his seminal textbook: *Mass Communication Theory: An Introduction*. Initially, this textbook and its first editions considered the field strictly from a social–scientific perspective. However, this changed after the *University of Amsterdam*, where he was a full professor from 1977 until his retirement of 1997, merged into one department colleagues studying (mass) communication, political communication, and media psychology as well as cultural studies and (feminist) media studies. This mixing of faculty and perspectives rubbed off on Denis, as did the growing complexity of the literature in the field, and subsequent editions of the textbook included insights from humanities and social sciences approaches to the study of mass communication.

Second, instead of merely listing the various paradigms, theories, and methods in the field, most of his book consists of an attempt to weave the story of the field across the particularities of any single approach or study. The first read of his book is always a bit overwhelming; I distinctly remember a colleague describing it as stumbling across a fallen over set of full bookcases, which always makes me laugh. Indeed, Denis was magisterial in bringing so many authors into conversation with each other.

Third, although the first instance of the textbook came out of a European research project Denis was involved in, it gradually evolved to become a global 'book of books' in media and communication theory. Although there is still much more work to be done in future editions of the book to make it truly inclusive and representative of the global nature of our field, I do not know of any other textbook that has made such an effort to open up a worldwide dialogue on theory that encompasses all aspects of the mass communication process. I feel it is therefore warranted to use the work on the current, seventh, edition of the book as grounding the argument as outlined in this paper.

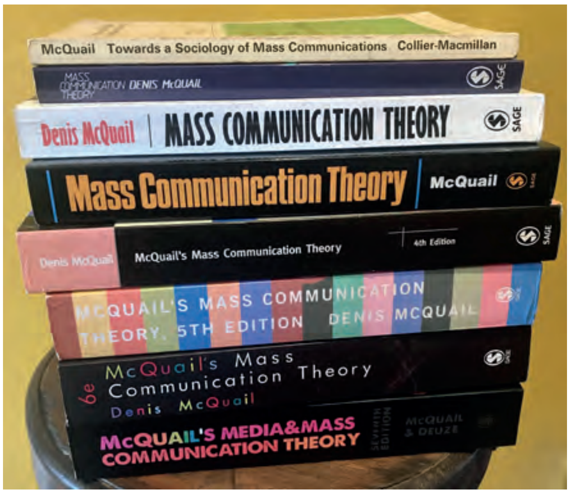


Towards a Sociology of Mass Communications (1969)
ISBN: 978 0 029748008



First edition of *Mass communication theory* (1983)
ISBN: 978 0 803997714

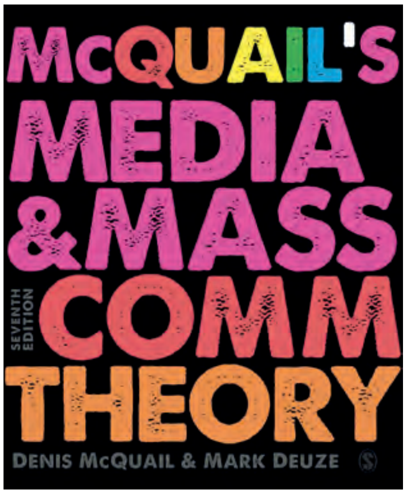
This paper first proposes a *genealogy* (rather than a more or less linear history) of mass media and communication research, identifying common concepts, themes and assumptions in terms of lessons learned from over a century of scholarly work.



Denis McQuail books sorted by their edition number (author's collection)

The argument then articulates this history with recurring claims toward *rethinking*, renewing or altogether abandoning mass media and communication theories and processes in the context of contemporary developments – particularly regarding technological advances and subsequently changing communication processes on a global scale.

Thirdly, it offers an assessment of the current *convergence* of the three core mediated communication categories – mass communication, interpersonal communication, and mass self-communication – as well as a *collapse* of the traditional taxonomy of the communication process – production, content, and reception. One could question whether these categories still hold in our digitally networked, always-on, and permanently connected world. The very act of questioning the categories destabilizes much twentieth-century theorizing about the role and impact of media on society, which in turn necessitates a careful reassessment of what we know.



McQuail's 7th edition of *Media (& Mass) Communication Theory*, coauthored with Mark Deuze (2020)
ISBN: 978 1 473902510

In conclusion, an attempt is made to recapture the normative and hopeful essence of the field – as our work tends to be implicitly or explicitly informed by an expectation that our results and findings will improve people's lives and the functioning of institutions in society in some way. In all our work as media and communication scholars, we inevitably expect media to be a force for good (and are concerned when they do not).

In doing so, I hope to bridge real or perceived gaps between social scientific and humanities-based traditions as much as Denis McQuail has done, and to advocate a *vital*, *creative*, and *public* way forward for the field.

2. On the origins and evolution of mass media and communication

The foundational assumptions of the disciplinary and disciplined study of mass media and communication are grounded in a set of basic definitions. Mass communication, first and foremost, refers to messages transmitted to a large audience via one or more media. Media are the (technological and formally organized) means of transmission of such messages. Media theory considers how these messages mean different things to different people as determined by the (affordances of) different channels used to communicate them. Media and (mass) communication matter, as they are paramount to

> "the production and reproduction of sociality, social relations, social structures, social systems, and society" (**Fuchs**, 2020, p. 377).

It is this 'productivity' of media and mass communication that is key to our field of study, as it raises awareness about how (almost) nothing in society and everyday life can be comprehensively understood without considering the role media and communication play in it.

Whether it is one's love life and romantic relationships, the ties and networks that make work and the functioning of companies and corporations possible, or the intricacies of politics and the political system – in all of these areas media and communication play a formative (and sometimes determining) role. This fundamental realization originally gave rise to much hand-wringing about the potentially problematic impact media and mass communication would have on people and institutions, which inspired the first studies on the effects of media, now just over a hundred years ago.

The concept of mass communication was first coined during the 1920s to apply to the new possibilities for public communication arising from the emerging mass press, radio, and film. These media enlarged the potential audience beyond a literate minority. The industrial style and scale of the organization of production and dissemination were also essentially new. Large populations of nation states could be reached more or less simultaneously with much the same content, often content that carried the stamp of

In all our work as media and communication scholars, we inevitably expect media to be a force for good

> (Almost) nothing in society and everyday life can be comprehensively understood without considering the role media and communication play in it

approval of those with political and social power. The then new mass media of press, film and radio, along with recorded music, also gave rise to a new variant of 'popular culture', in which political and social ideologies were often embedded. **Blumer** (1939) was among the first to provide an explicit framework in which the audience could be exemplified as a new form of collectivity made possible by the conditions of modern societies. He called this phenomenon a 'mass' and differentiated it from older social forms –especially the group, the crowd and the public–. The mass audience was large, heterogeneous, and widely dispersed, and its members did not and could not know each other. This view of the mass audience is less a description of reality than an accentuation of features typical of conditions of mass production and distribution of news and entertainment reflecting industrial logics and methodological constructs rather than reality and lived experience. In the digital age, the concept has been reconceptualized in terms of 'networks' (**Van-Dijk**, 1992; 2020) and the 'multitude' (**Hardt**; **Negri**, 2005) to articulate the mass with the Internet and the generally dispersed, fragmented, and disjointed nature of group formation online.

The context for developments in mass media and communication since the start of the twentieth century has been one of rapid and constant change in the world of newly industrialized and centralized nation states. It has been a time of growth and concentration of population in large cities, of the mechanization and bureaucratization of all aspects of life, and imperialist expansion (as well as disintegration) by the great powers of the time. It was also a period of profound political change, of large social movements, unrest within states, and catastrophic warfare between states. Populations were mobilized towards national achievement or survival and the new mass media played their part in these events as well as providing the masses with the means of relaxation and entertainment. Against this background the concepts of mass media and mass communication were forged and rose to a dominant status as objects of public concern – for example about the purported effects of listening to the radio, going to the cinema, or falling for the manipulations of populist politicians and wartime propaganda.

The early meaning of 'mass communication,' and one that still lingers, derived much more from the notion of people as a 'mass' and from the perceived characteristics of the mass media than from any idea of communication. The 'mass' was perceived primarily in terms of its size, anonymity, general ignorance, lack of stability and rationality, and as a result was vulnerable to persuasion or suggestion. It was seen to be in need of control and guidance by the superior classes and leaders, and the mass media provided the means for achieving this. Although research conducted especially in the second half of the twentieth century consistently provided much careful nuance to any such claims and expectations of the power of the media or the role of the masses, it is a common theme in contemporary debates – especially in a time of a 'infodemic' as well as a pandemic – to assume that mass media and communication has powerful effects on not just cognition and attitude, but even behavior of people.

As a 'communication science' developed, a more formal definition of the concept of mass communication emerged that was not based on untested impressions, the claims of publicists or social theorists, but on objective characteristics of media that could be specified and put to the test. In the course of the twentieth century, an abstract model of mass communication was developed with the following typical features:

- A centralized production of content by a few large channels, with a center-peripheral network of dissemination that was typically hierarchical and one-directional.
  An organization of production and distribution operating according to the logic of the market or as a state-run institution of public communication.
- Message content in standardized forms open to all but also subject to normative and political supervision or control.
- A mass public of receivers made up of many dispersed, anonymous, and disconnected individuals.
- The attribution of great power to persuade and inform, arising from the prestige or popularity of sources, the monopolistic control of channels, the near instantaneity of reception, the skill of practitioners and the supposedly high impact and appeal of the means employed.

From one perspective, the general hypothesis of mass communication has played a fruitful role by the very fact of being comprehensively disputed and disproved. The research it generated led to a much firmer understanding of key principles underlying mass mediated communication. In this respect, a series of fundamental insights that hold up today as much as they have done throughout history, can be summarized with the benefit of hindsight:

- Interpersonal communication is often a much more compelling or even competing form and source of influence on people's attitudes and behaviors, especially as this category coincides (and to some extent converges) with those of mass communication and mass self-communication in the context of online social networks.
- The professional production of media follows an industrial logic, with a highly structured and routinized production pipeline and process, while at the same time undergoing constant change to accommodate fickle audiences that are increasingly less likely to congregate as a 'mass' around content.
- Media content typically has multiple (or no identifiable) purposes for its makers and transmitters, and no fixed meaning for its receivers, and thus is largely without predictable effects attached.

- The concept of a media audience consisting of isolated individuals who are living inside their own personal information spaces (or equally evocative concepts such as 'filter bubbles', 'telecocoons', and 'echo chambers') tends to be largely an illusion, just as much as the opposite view of the audience as a more or less amorphous and amoral mass haplessly consuming content is a fallacy.
- The conditions of media influence and effect (however conceptualized) depend on structural, social, and individual contexts as well as media properties and technological affordances, and on variable features of reception, rather than simply on the fact of transmission.

These and other lessons have been learned well enough and both challenge and confirm the mass media and communication thesis. The mass communication idea was a compelling one that has proved very resilient because it is based on much that seems observable and plausible. It has a broad appeal to those who seek to benefit from it as senders, as well as to audiences. It is a convenient formulation for those who study it and, for those who are highly critical, it provides a useful summary of what is essentially wrong with the phenomenon. It is not easy to redefine or replace, even when many of the conditions of its origin have changed and many of its inbuilt assumptions have been disputed. For much of the twentieth century, the concept in this form has exerted an excessive influence on both popular and expert ideas about the influence of mass media. It has also shaped the direction of media research, despite recurrent evidence that has undermined the foundations on which it was based and cast doubt on the hypothesized effects.

> The professional production of media follows an industrial logic, with a highly structured and routinized production pipeline and process, while at the same time undergoing constant change to accommodate fickle audiences that are increasingly less likely to congregate as a 'mass' around content

We can now see quite clearly that the era of mass communication is best viewed as a transitional phase of industrial mass public communication – while throughout the developments in the media there has been a continuity of mass communication as a society-wide process. This continuity today is established in new forms that are made up of a much finer and tightly woven network of lines and connections (both online and offline) that has an organic character rather than being constructed and controlled by a few for their own ends. Although the structures that underpin the media and mass communication process are liquid, it is still possible to observe these various instances of production, content, and reception, and to make generalizable statements about them. There is continuity in all this discontinuity. Much of this constancy, however dispersed, hybridized, networked, or automated, is observed in our field based on a relatively uniform set of fundamental assumptions, as outlined by **Lang** (2013):

- First, media and mass communication are pervasive and ubiquitous.
- Secondly, media and mass communication act upon (and are acted upon by) people and their social environments.
- Thirdly, media and mass communication change both the environment and the person.
- Fourthly, the primary goals and questions of media and mass communication researchers are to demonstrate the various elements, roles, influences and effects of media and mass communication, and, if possible, explain how they come about.

These assumptions hold for both the humanities-inspired practice of media studies and the social-science-oriented domain of communication research, despite their sometimes different theoretical and methodological alignments. A sidenote here must be that we tend to make too much of the purported differences between the two domains, especially in a contemporary context of interdisciplinarity, mixed methods and integrative research.

3. The end of mass media and communication

Throughout the history of the field, there have been numerous analyses pointedly arguing for the reconsideration, dismantling, or altogether 'end' of the mass media and communication thesis, theory, and paradigm. Especially following rapid developments in new information and communication technologies, scholars postulated as far back as the 1980s that

> "technological change may facilitate a long-needed paradigm shift in communication science" (**Reardon**; **Rogers**, 1988, p. 297).

The introduction of Global System for Mobile communications (GSM) phones and the World Wide Web as the graphic user interface of the Internet – both in the early 1990s – amplified predictions about the end of mass media and communication, as

> "the [portable and decentralized] characteristics of the new media are cracking the foundations of our conception of mass communication" (**Chaffee**; **Metzger**, 2001, p. 369).

> Mass communication is nowadays established in new forms that are made up of a much finer and tightly woven network of lines and connections (both online and offline) that has an organic character rather than being constructed and controlled by a few for their own ends

However, after studying 'old' and 'new' media as well as offline and online communication practices over several decades, and considering the various ways in which media devices, institutions and (networks of) people adapt to this constantly changing context, one has to conclude that mass communication has remained (or returned as) a significant way to make sense of our media environment. Similarly, the former mass media organizations (such as publishers, broadcast and cable television firms) are in many ways bigger and more influential than ever before, increasingly operating on an interconnected, interdependent, and altogether global scale. There is also no doubt that something like a predictable process of effect does occur in some circumstances. Similarly, it is safe to argue that the theory in general outline is still dear to the heart of advertisers and propagandists, as much as populist politicians. Much critical theory directed at mass media and communication still depends on the essential validity of the original mass communication thesis, and the contemporary context at the time of writing – the worldwide coronavirus crisis – coincides with an equally global return to the notion of mass media and communication as having powerful effects on people, given widespread concerns about an infodemic developing alongside the Covid-19 pandemic.

> The primary goals and questions of media and mass communication researchers are to demonstrate the various elements, roles, influences and effects of media and mass communication, and, if possible, explain how they come about

Given these historical lessons learned from the study of mass media and communication, we can now turn to the current context. At the heart of the contemporary study of (mass) media and communication in society lies the realization that there is nothing 'outside' media anymore. In some way, all the experiences in everyday life are connected to media. Some of this refers to professionally produced media (as artefacts and practices): from the smartphone to the television, from newspapers and books to motion pictures, digital games and recorded music. Yet much of the media that play such a profound role in people's daily lives consist of data, content and experiences that are produced by us – via logins and uploads to social media and platforms, voluntary (and involuntary) participation in all kinds of digital surveillance mechanisms, and by making our own media. Although 'mass' audiences for the most part may be a thing of the past, the potentials of 'mass' media and 'mass' communication are still part of almost all our engagements with media.

Livingstone (2011, p. 1472) considers that the continued significance of mass media and communication theory lies in the fact that

> "everything is mediated –from childhood to war, politics to sex, science to religion– and more so than ever before […] Nothing remains unmediated."

Her analysis echoes earlier sentiments, such as expressed by **Hardt** and **Negri** (2000, p. 291), arguing that an understanding of the contemporary human condition cannot be separated from the context of a media environment that is both ubiquitous and pervasive. As Livingstone suggests, mass communication has always been constitutive of society, fundamental to all human action. What is perhaps particular about the last few decades is how a whole range of rapidly expanding media technologies have amplified and accelerated human communication on an unprecedented scale. In the process of this 'mediation of everything' (**Livingstone**, 2009), media have permeated not only the world but also, and perhaps more importantly, the ways in which we (as humans) have access to, act in, and make sense of that world.

> Mass communication has remained (or returned) as a significant way to make sense of our media environment

Mass media and communication theory is crucial to consider, given the fundamental challenges of our time regarding big data, the role of algorithms, and the dissolution of individuals into endless databanks, samples, targets, and markets, the Internet of Things, and a renewed scholarly as well as public interest in the political economy of digital culture, and the many efforts in the field to rethink and retheorize the profound role media play in everyday life, in politics, and the construction of reality (**Couldry**; **Hepp**, 2016). The (continued and growing) significance of mass media and communication theory and research in part follows from its status as a 'practical discipline' (**Craig**, 2018), in that the field primarily concerns itself with what people and social institutions actually *do* with media – and is generally committed to answering societal communication problems with research of real-world relevance.

Notions of 'mass' media and 'mass' communication exist side by side with (inter)personal communication and mass self-communication in today's digital, online and interconnected media environment, and these

> "three forms of communication coexist, interact, and complement each other rather than substituting for one another" (**Castells**, 2009, p. 55).

This map of conceivable communication patterns is a reminder of the possibly subsidiary status of 'mass communication' functions in the total spectrum of mediated communication. It is also a reminder that patterns of communication do not coincide very closely with particular media or even their dominant forms. Older types of mass media (even television) have developed consultation and conversational possibilities and newer online media are increasingly being used for different types of 'egocasting' (**Rosen**, 2004), 'narrowcasting' and 'broadcasting'. The telephone, once predominantly a medium of conversation, has joined in this expansion of usage potential and technological affordance, as the contemporary smartphone is many things above and beyond a mere telephone: a game console, a television, a fitness and health device, a personal organizer, a video-recorder, etc. These processes are part of the larger process of convergence made possible (and to some extent determined) by digitalization.

> The contemporary context at the time of writing – the worldwide coronavirus crisis – coincides with an equally global return to the notion of mass media and communication as having powerful effects on people

These and other circumstances reflect not the end of mass media or of mass communication, but rather a significant and ongoing shift in the ways that purposes of public communication can be achieved. The original means of mass communication consisted primarily of reaching an entire national public with a relatively uniform restricted range of content. Transmission would be direct, rapid, and very cost-effective. This 'industrial' vision of both ends and means has given way to a different version of mass communication: more personal and private, more targeted and interactive, more diffuse, and perhaps even more powerful than before in some instances.

The overall goal of public communication is still to be able to know and give shape to the mediated experience of a target population, although not by the monopoly imposition of a suitable limited range of ideas, information, motives, and stimuli. Now the chosen means is to provide a highly differentiated range of content targeted towards innumerable subgroups and segments in the public, taking account of the interests, tastes, and circumstances of the receivers. The fragmented nature of the contemporary media audience is therefore as much the product of market differentiation by a global industry as it is the result of individualization and the rise of networked individualism (**Wellman**, 2002).

The purposes of mass media and communication are more varied and more opaque than they ever were in the past. The whole process is held together not by a rigid and uniform structure of provision and a stable pattern of mass reception, but by the voluntary engagement of the public in its own immersion in a rich and varied world of mediated experience, to which it contributes both voluntarily (through mass self-communication) and involuntarily (through sharing detailed personal data with providers and platforms online). The personal networks and ties that were said to provide a barrier to the influence of older mass media are now playing a positive role in reinforcing demand and consumption on an endlessly changing and kaleidoscopic journey.

The evolution of a condition or state of mass communication (as redefined), which can now scarcely be distinguished from other social processes, is primarily due to its high degree of functionality for key driving forces in society and its intimate connection with human aspirations. Many of the actors who benefit from the capacity to communicate to all in a measured and calculated way are visible and their motivations are transparent. They include big advertisers and global media firms (both bigger and more concentrated than ever before), the world financial system, rulers and national governments, states with imperial ambitions and concern for their image, and the list goes on. It is inconceivable that these and others could dispense with the results of even 'smarter' and more effective communication to any chosen public constituency. The emerging, revived, and reinforced form of mass communication is highly consistent with underlying trends towards convergence and the globalization and mediatization of everything.

> The fragmented nature of the contemporary media audience is therefore as much the product of market differentiation by a global industry as it is the result of individualization and the rise of networked individualism.

4. Towards a grand narrative for media and mass communication research

The general trend (and recommendation) in the literature throughout media studies and communication science in recent years points towards increasing integration and cross-fertilization of models, methods, and paradigms in theory and research. However, this is easier said than done. Academic units tend to be organized along either social scientific or humanistic disciplinary boundaries, scholarly journals are equally singular in their preferred approaches, and combining perspectives can be time-consuming and costly (for example, when it comes to multiple method research designs). However, such observations can be made of almost any academic area and are not necessarily problematic for the coherence of a field. A scholarly discipline does not have unity because of consensual models or methods, but through articulating a more or less coherent narrative that weaves across all the different ways in which it approaches its object of study. I would argue that what binds research across the field are less than a handful of core approaches and assumptions about the nature of the communication process, and the materiality of the media involved.

Research in media and mass communication can be mapped along several key areas of investigation, each with its own prevailing perspectives about the nature of our relationship with (our) media. Generally speaking, a fundamental organizing principle of work in the field would be a distinction between considering mediated communication as something that happens to people – where messages are sent and received in relatively straightforward manner, and be studied as such – or as something that occurs in the context of a complex variety of sense-making and meaning-giving practices, all contributing to the influence and impact of whatever is mediated. This distinction follows roughly from **Carey**'s (1975) original contrast between a *transmission* and a *ritual* view of communication. Following Carey, a transmission view considers communication as a process of transmitting a fixed quantity of information –the message as determined by the sender or source–. This represents the linear sequence of

sender > message > receiver

which is largely built into standard definitions of the nature of predominant forms of mass communication. Although there are many ways in which this representation of the mass communication process can be challenged, it lives on because it usefully distinguishes the selecting role of specific mass communicators, it involves an appreciation that this selection is undertaken according to an assessment of what the audience will find interesting; and the third is that communication is not considered purposive beyond publication and seeking attention for its message. These assumptions about the process enable precise research questions and targeted theorizing about media effects, influence, and audience reception. Content analyses from a transmission point of view tend to treat different media in isolation, focusing completely on the 'text' of a medium – such as a news story, a motion picture, a television series, a digital game franchise, or a particular app. Completing the taxonomy, transmission-based work in production studies would be focused on the media making pipeline and across the entire product cycle of a media industry (**Deuze**; **Prenger**, 2019). More often than not, scholars in this area of research are inspired by a political economy approach to the media, which 'follows the money' in terms of its assumptions where media influence comes from, and what it intends to affect.

A transmission view of (mass) communication is incomplete and possibly misleading as a representation of most media activities and of the diversity of communication processes that are at work. One reason for its weakness is the limitation of communication to the matter of 'transmission'. Carey pointed to an alternative view of communication as 'ritual', according to which:

> "communication is linked to terms such as 'sharing,' 'participation,' 'association,' 'fellowship,' and 'the possession of a common faith'."

This definition exploits the ancient identity and common roots of the terms

> "'commonness,' "communion,' "community,' and 'communication.' A ritual view of communication is directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs" (1975 [1989], p. 18).

Seen as such, communication becomes an exchange – a participatory act where meanings depend on shared practices, understandings, and emotions, and where medium, message as much as the sending and receiving of messages are hard to separate empirically. Research adopting a ritual view of communication tends to be less interested in questions of influence, asking more specific questions about the pervasive and ubiquitous role media play in the ways society's institutions function, as well as in the way people structure and give meaning to their everyday lives. The influence of media tends to be taken for granted in this type of research, with more attention paid to patterns of appropriation and integration of media into for example the political process, how media are 'domesticated' at home, or how people organize themselves into (new) social movements using (new) media. The content of the media, when considered from a ritual point of view, is seen in context, often based on the assumption that all mediated content is polysemic. In other words: media production, circulation, representation, identity, consumption, and regulation are all interdependent, and all highlight the power – or lack thereof – of various stakeholders in the mass communication process.

Media production, circulation, representation, identity, consumption, and regulation are all interdependent, and all highlight the power – or lack thereof – of various stakeholders in the mass communication process

Although this organizing principle in media and mass communication scholarship sounds deceptively straightforward, the contemporary reality belies such easy classification. A particular observation needs to be made about the nature of our current digital environment, where the mass media of old (newspapers, television, radio) not just exist side-by-side with personal (and portable) media, such as smartphones, tablets, and laptop computers, but generally have converged with them. This means that the mass communication process cuts across the materiality of both mass and personal media, and that interpersonal communication likewise benefits from multiple ways of circulation. The digital media environment has contributed to a collapsing of categories, inspiring much creativity and innovation across this field of research – and contributing to a worldwide soul-searching of what the story of our field is.

5. What media and mass communication theory and research tells us

At the heart of the (contemporary) story and teaching of media and mass communication – in terms of the traditional production/content/reception taxonomy – are notions of convergence, integration, and hybridity. Media industries are converging, stretching their operations across multiple channels and platforms. The content of mass mediated messages gets similarly remixed, transforming formats and genre conventions. Audiences large and small congregate and dissipate in an instant and are not always acting like audiences anymore – as media consumption can go hand in hand with media production. Underneath it all run vast social, economic, and political transformations, not determined but most certainly amplified and accelerated by rapid developments in new technologies and media and a deeply emotional sense of urgency.

> What seems to be the meta-narrative of media and mass communication is embodied in the big shift from more or less stable to fluid and flexible structures across both our field and its objects of study

What seems to be the meta-narrative of media and mass communication is embodied in the big shift from more or less stable to fluid and flexible structures across both our field and its objects of study.

Examples of the seemingly stable media and mass communication structures informing much research and theorizing in our field are:

- Media production taking place in newsrooms, the film and television studio system, within large holding firms and multinational corporations
- Media content based on more or less consensual, strategically routinized and altogether formulaic industry formats and genre conventions
- Media audiences massively aggregated and programmed around schedules and more or less predictable media events

These three key elements of the mass communication process are increasingly fluid or 'liquid' today, in that their constituent elements change faster than it takes new structures to sediment (paraphrasing **Bauman**, 2000):

- A trend toward multiplatform and multichannel industry structures and value chains, with production increasingly organized through 'atypical' working arrangements
- Rapid development of a wide variety of multimedia, crossmedia and transmedia storytelling forms throughout contemporary media productions
- Concurrent media exposure, co-creation, and ensemblematic media use as standard types of contemporary ways of being a media consumer and belonging to an audience

Across all these developments, the three fundamental types of communication that form the object of study in most media and communication research – mass communication, interpersonal communication, and mass self-communication – converge in a hybrid media environment that necessitates equally hybrid forms of scholarship. What all of this suggests is the need, now more than ever, to consider the overall story of the various theories and theoretical traditions in the field. To indeed consider them as connections within a 'grand narrative' that enables us to tackle the complexities of our media environment.

Most scholars in the field today would acknowledge that it has become less than useful to study media in isolation and out of context, suggesting that our relationship to media has become too intimate – both in a technological sense, as our devices feel and 'live' quite close to us, and in an affective sense, as we clearly love (and sometimes hate) our media. Although such an approach to media as an ensemble of devices and activities collectively constituting how people understand and co-ordinate their everyday life has been advocated in the literature for many decades (**Bausinger**, 1984), only quite recently is such work becoming more common, often informed by considerations of 'media life' (**Deuze**, 2012), 'polymedia' (**Madianou**; **Miller**, 2013), media 'territories' (**Tosoni**; **Tarantino**, 2013), media 'repertoires' (**Haddon**, 2016), 'communicative figurations' (**Hepp**; **Breiter**; **Hasebrink**, 2018), and media as an all-encompassing 'digital environment' (**Boczkowski**; **Mitchelstein**, 2021). Beyond such holistic theorizing, rigorous empirical work today addresses the interaction and conjunction of multiple devices, channels, and platforms when considering how people access, use, and make sense of their media – rather than studying any medium or use thereof in isolation.

> Rigorous empirical work today addresses the interaction and conjunction of multiple devices, channels, and platforms when considering how people access, use, and make sense of their media – rather than studying any medium or use thereof in isolation.

To talk about media influence and 'effects' in this environmental context seems impossibly difficult, yet sophisticated theoretical frameworks are being developed across the humanities and social sciences that show great promise in tackling this discussion – including, but not limited to, work on (deep) mediatization and understanding media use as communicative figurations (**Hepp**; **Breiter**; **Hasebrink**, 2018), and emerging models and approaches to investigate complex reciprocal media effects (**Valkenburg**; **Peter**; **Walther**, 2016).

In a new media context, the distinctions between one or more senders and a 'mass' of receivers *versus* the perceived intimacy of personal communication, between the formal and informal organization of communication, and between different (yet converging) technologies seem to be difficult to maintain. In a contemporary context, it can certainly be argued that interactive communication technologies simply multiply opportunities for all forms of conversation, and

> "[w]hat has evolved is mass communication, and as a result, the joint effects of mass and interpersonal communication differ from those which they formerly rendered" (**Walther**; **Valkenburg**, 2017, p. 421).

Collapsing mass communication and interpersonal communication along dimensions of personalization into a model of 'mass personal' communication (**O'Sullivan**; **Carr**, 2018) in fact reaffirms their age-old separation. In today's digital, online, and interconnected media environment, different forms of communication coexist, often simultaneously, highlighting the need for nuanced appraisal. The study of mass media and communication is still at the heart of our field – in part, because the contemporary 'media manifold' (**Couldry**, 2016) reinvigorates concerns about the role and influence of mass media and mass communication practices, and in part due to the nature of mass communication as underlying all forms of communication, in turn amplified by processes particular to mass media. All of this gets exemplified by a preponderance of research topics covered in contemporary scholarship signaling a prevalence of 'mass' concepts (often mixed or integrated with other levels of communication) including, but not limited to:

- Big data as a primary driver of the digital economy, and as an increasingly powerful tool in political communication (for example, regarding the micro-targeting of individuals on a massive scale with customized messages as a staple of contemporary election campaigns).
- The Internet of things as the rise of a 'non-human' mass communication network (linking things such as home appliances, health monitoring systems and all kinds of sensors to the Internet), affecting our lives in numerous ways.
  A political economy of digital capitalism, inspired by the enormous global (market) power of telecommunications, information, and media corporations, such as *Microsoft*, *Apple*, *Amazon*, *Alphabet* (including *Google*), *Facebook*, *Tencent*, and the *Alibaba Group*.
- The recurring public concern with 'balkanization' (**Sunstein**, 2001), 'telecocoons' (**Habuchi**, 2005), 'echo chambers' (**Jamieson**; **Cappella**, 2008), 'filter bubbles' (**Pariser**, 2012), and other forms of highly personalized information spaces within which people spend significant time when using media, suggesting an ongoing conflation of 'mass' communication and interpersonal (and even intrapersonal) communication (**Walther**; **Valkenburg**, 2017). Interestingly, the empirical work on these issues tends to 'burst' the filter bubble myth, finding instead that people's media habits are a much more complex mix between self-selected and pre-selected personalization that generally does not lead to polarization, and that there are many factors mitigating the role of fake news, filter bubbles and echo chambers (**Borgesius** *et al.*, 2016; **Fletcher**; **Kleis-Nielsen**, 2017; **Dutton**; **Fernández**, 2019).
- The rise of all kinds of (more or less) new social movements and forms of collective action primarily facilitated and organized through online and mobile communication networks, which are playing a key role in influencing sentiments around matters of public interest.
- A growing recognition by teachers, scholars, policymakers, and politicians regarding the need to invest in digital literacy and making citizens 'mediawise,' while at the same time developing new policies to effectively govern the Internet (and curtail people's Internet use) with regard to areas such as privacy, online harm, and copyrights.
- A renewed interest in the influence and impact of media, featuring multivariate, mixed-method, and multi-step flow communication research designs to accommodate the 'double bind' of media effects: on the one hand, scholars in the field do not assume – as was common in much of the twentieth century – that media are all-powerful and have direct effects on people, instead acknowledging how the impact of media is indirect, conditional, and transactional (**Valkenbur**g; **Peter**; **Walther**, 2016). On the other hand, it is beyond any doubt that we live in a time of 'deep mediatization' (**Couldry**; **Hepp**, 2016), where media can be considered to be at the center of today's institutions and activities, fueling social and political transformations through an interplay of people's use and consumption practices and the media's own internal logic.

6. Discussion and conclusion

Across the literature there is an emerging consensus around the need for cross-disciplinary theorizing, mixed-methods designs, and other approaches that combine and remix the various strands and traditions of media and mass communication scholarship. As **Valkenburg** (2017, p. 11) remarks about the prospect of combining research on mass, interpersonal and computer-mediated communication,

> "[i]ntegrative research that crosses different communication subdisciplines is even more sorely needed than a few decades ago."

Likewise, **Hartley** (2012), in his assessment of the digital futures for media studies, passionately advocates research to go between disciplines, to translate across differences, and therefore to embrace a *vitality* in theory and research.

A rich vocabulary to talk about the implications of the developments of communication that are taking place is emerging – one that questions simplistic models and modes of doing research, one that takes technologies as much as affect into theoretical consideration, one that does justice to the multimedia nature of all aspects of the mass communication process. What is also remarkable is that media and mass communication scholarship is finding all kinds of more or less new ways to communicate about itself, increasingly embracing creative and public forms of scholarship.

Media and mass communication scholarship is finding all kinds of more or less new ways to communicate about itself, increasingly embracing creative and public forms of scholarship

Scholars take to social media, blogs and vlogs, and other forms of public expression – including pushing for completely open-access publications, as well as embracing the arts (for example, dance, poetry, and music) – to engage as researchers, practitioners, experts, advocates, activists, and critics (**Archetti**, 2017b; **Witschge**; **Deuze**; **Willemsen**, 2019), truly in the spirit of what **Waisbord** (2019b) advocates as a renewed sense of 'public' scholarship.

Elsewhere (see **Deuze**, 2021), I have outlined what I consider as the fundamental challenges for media studies and communication science as it moves deep into the twenty-first century – a comprehensively mediated century, indeed. In sequence, I first considered how the field needs to recognize and acknowledge where it is coming from – as I have tried to outline in this paper. Secondly, I advocate – as do so many of my colleagues around the world – a truly 'post-disciplinary' approach to research, bridging or bypassing disciplinary boundaries and methodological silos. Thirdly, I would like to echo and celebrate the emergence of engaged and public scholarship in our field, as more media and mass communication scholars become confident in expressing not just what we *find out about*, but also what we *can do with* media and mass communication teaching and research.

The grand narrative of our field is, in conclusion, twofold – and perhaps somewhat counterintuitive. On the one hand, it is clear that mass media and communication are of profound importance for the functioning of society as well as our attitude and behavior toward the world we live in. The two main scholarly traditions in our field align in their perspective that media and mass communication are (or can be) powerful agents of change in society, where communication research seeks to find evidence (and explanations) for such effects, and media studies tends to take this powerful role for granted, opting to explore avenues for critique of the way media operate in society (**Lang**, 2013).

On the other hand, the end result of all this agreement and alignment must be that we have to conclude that, overall, media are not all that powerful. A century of scholarship leaves little doubt that media do have many effects and they probably do account for some general trends. However, media effects are inconsistent and often cancel each other out, and complex societies can be characterized by different lines of development and subsequent roles for media at the same time. As is the conclusion of much of the research in our field: media have some effects on some people in some circumstances some of the time.

This seemingly paradoxical narrative – media are everything, and they are nothing – is haunting our field. As the world is stuck behind a screen at home, public and political debates rage on cyberbullying and online harassment, the role of powerful algorithms and artificial intelligence, rising privacy and security concerns, problematic media use and media addiction, fake news and disinformation campaigns, conspiracy theories and declining trust in institutions. Our answer to all of this is consistently and necessarily ambiguous:

- yes, these are all important issues that clearly warrant our concern;
- no, none of these issues is likely to change much how most people live their lives, make their decisions, nor in how society and its institutions generally function.

However, in everything that people do, and in every single act of an institution in society, media and mass communication play a formative role. Regrettably, that role is complex. Yet aspirationally, our increasingly sophisticated research, theorizing, and teaching across the humanities and social sciences (and elsewhere) contributes to understanding this role and how it can be used for (the common) good. It is my hope that this mapping essay sheds some light on how we know what we know, where we came from, and where we may be headed. It is an exciting time to be a media and communication scholar.

7. References

Archetti, Cristina (2017). "Journalism, practice and… poetry: Or the unexpected effects of creative writing on journalism research". *Journalism studies*, v. 18, n. 9, pp. 1106-1127.
https://doi.org/10.1080/1461670X.2015.1111773

Bauman, Zygmunt (2000). *Liquid modernity*. Cambridge: Polity. ISBN: 978 0 745624105

Bauman, Zygmunt (2005). *Liquid life*. Cambridge: Polity. ISBN: 978 0 745636801

Bausinger, Hermann (1984). "Media, technology and daily life". *Media, culture & society*, v. 6, n. 4, pp. 343-351.
https://doi.org/10.1177/016344378400600403

Boczkowski, Pablo J.; **Mitchelstein, Eugenia** (eds.) (2021). *The digital environment*. Boston: MIT Press. ISBN: 978 0 262046190

Borgesius, Frederick-Zuiderveen; **Trilling, Damian**; **Möller, Judith**; **Bodó, Balázs**; **De-Vreese, Claes H.**; **Helberger, Natali** (2016). "Should we worry about filter bubbles?". *Internet policy review*, v. 5, n. 1.
https://doi.org/10.14763/2016.1.401

Calhoun, Craig (2011). "Communication as social science (and more)". *International journal of communication*, v. 5, pp. 1479-1496.
https://ijoc.org/index.php/ijoc/article/view/1331/622

Carey, James W. (1989[1975]). "A cultural approach to communication". In: Carey, J. W., *Communication as culture*, pp. 13-36. Boston: Unwin Hyman. ISBN: 978 0 044450627

Castells, Manuel (2009). *Communication power*. Oxford: Oxford University Press. ISBN: 978 0 19 956704 1

Chaffee, Steven H.; **Metzger, Miriam J.** (2001). "The end of mass communication?". *Mass communication & society*, v. 4, n. 4, pp. 365-379.
https://doi.org/10.1207/S15327825MCS0404_3

Couldry, Nick (2016). "Life with the media manifold: Between freedom and subjection". In: L. Kramp; N. Carpentier; A. Hepp; R. Kilborn; R. Kunelius; H. Nieminen; T. Olsson; P. Pruul- mann-Vengerfeldt; I. Tomanić Trivundža; S. Tosoni (eds.). *Politics, civil society and participation: Media and communications in a transforming environment*, pp. 25-39. Bremen: Edition Lumière. ISBN: 978 3 943245 54 7

Couldry, Nick; **Hepp, Andreas** (2016). *The mediated construction of reality*. Cambridge: Polity. ISBN: 978 0 745 68130 6

Craig, Robert T. (2008). "For a practical discipline". *Journal of communication*, v. 68, n. 2, pp. 289-297.
https://doi.org/10.1093/joc/jqx013

Deuze, Mark (2012). *Media life*. Cambridge: Polity. ISBN: 978 0 745650005

Deuze, Mark (2021). "Challenges and opportunities for the future of media and mass communication theory and research". *Central European journal of communication*, v. 14.
https://cejc.ptks.pl

Deuze, Mark; **Prenger, Mirjam** (eds.) (2019). *Making media*. Amsterdam: Amsterdam University Press. ISBN: 978 94 62988118

Dutton, William H.; **Fernández, Laleah** (2019). "How susceptible are internet users?". *Intermedia*, v. 46, n. 4.
https://doi.org/10.2139/ssrn.3316768

Fletcher, Richard; **Kleis-Nielsen, Rasmus** (2017). "Are news audiences increasingly fragmented? A cross-national comparative analysis of cross-platform news audience fragmentation and duplication". *Journal of communication*, v. 67, n. 4, pp. 476-498.
https://doi.org/10.1111/jcom.12315

Fuchs, Christian (2020). "Everyday life and everyday communication in coronavirus capitalism". *TripleC*, v. 18, n. 1, pp. 375-399.
https://doi.org/10.31269/triplec.v18i1.1167

Fuchs, Christian; **Qiu, Jack-Linchuan** (2018). "Ferments in the field: Introductory reflections on the past, present and future of communication studies". *Journal of communication*, v. 68, n. 2, pp. 219-232.
https://doi.org/10.1093/joc/jqy008

Habuchi, Ichyo (2005). "Accelerating reflexivity". In: Ito, Mizuko; Matsuda, Misa; Okabe, Daisuke (eds.). *Personal, portable, pedestrian: mobile phones in Japanese life*. Cambridge: MIT Press. ISBN: 978 0 262090391
https://doi.org/10.7551/mitpress/5309.001.0001

Hardt, Michael; **Negri, Antonio** (2000). *Empire*. Cambridge: Harvard University Press. ISBN: 978 0 674006713

Hardt, Michael; **Negri, Antonio** (2005). *Multitude: War and democracy in the age of empire*. New York: Penguin Books. ISBN: 978 0 143035596

Hartley, John (2012). *Digital futures for cultural and media studies*. Wiley-Blackwell. ISBN: 978 0 470 67100 9

Hepp, Andreas; **Breiter, Andreas**; **Hasebrink, Uwe** (eds.). (2018). *Communicative figurations: Transforming communications in times of deep mediatization*. Cham: Springer. ISBN: 978 3 319655833

Jamieson, Kathleen-Hall; **Cappella, Joseph N.** (2008). *Echo chamber*. Oxford: Oxford University Press. ISBN: 978 0 195398601

Lang, Annie (2013). "Discipline in crisis? The shifting paradigm of mass communication research". *Communication theory*, v. 23, n. 1, pp. 10-24.
https://doi.org/10.1111/comt.12000

Livingstone, Sonia (2009). "On the mediation of everything". *Journal of communication*, v. 59, n. 1.
https://doi.org/10.1111/j.1460-2466.2008.01401.x

Livingstone, Sonia (2011). "If everything is mediated, what is distinctive about the field of communication?". *International journal of communication*, v. 5, pp. 1472-1475.
https://ijoc.org/index.php/ijoc/article/view/1356/620

Madianou, Mirca; **Miller, Daniel** (2013). “Polymedia: Towards a new theory of digital media in interpersonal communication”. *International journal of cultural studies*, v. 16, n. 2, pp. 169-187.
https://doi.org/10.1177/1367877912452486

McQuail, Denis; **Deuze, Mark** (2020). McQuail’s media and mass communication theory, 7th edition. London: Sage. ISBN:

O’Sullivan, Patrick B.; **Carr, Caleb T.** (2018). “Masspersonal communication: A model bridging the mass-interpersonal divide”. *New media & society*, v. 20, n. 3, pp. 1161-1180.
https://doi.org/10.1177/1461444816686104

Pariser, Eli (2012). *The filter bubble*. London: Viking/Penguin. ISBN: 978 0 241954522

Reardon, Kathleen K.; **Rogers, Everett M.** (1988). “Interpersonal versus mass media communication a false dichotomy”. *Human communication research*, v. 15, n. 2, pp. 284-303.
https://doi.org/10.1111/j.1468-2958.1988.tb00185.x

Rosen, Christine (2004). “The age of egocasting”. *The new Atlantis*, n. 7, pp. 51-72.
https://www.thenewatlantis.com/publications/the-age-of-egocasting

Sunstein, Cass R. (2001). *Republic.com*. Princeton, NJ: Princeton University Press. ISBN: 978 0 691 07025 4

Tosoni, Simone; **Tarantino, Matteo** (2013). “Media territories and urban conflict: Exploring symbolic tactics and audience activities in the conflict over Paolo Sarpi, Milan”. *International communication gazette*, v. 75, n. 5-6, pp. 573-594.
https://doi.org/10.1177/1748048513491914

Valkenburg, Patti M. (2017). “Understanding self-effects in social media”. *Human communication research*, v. 43, n. 4, pp. 477-490.
https://doi.org/10.1111/hcre.12113

Valkenburg, Patti M.; **Peter, Jochen**; **Walther, Joseph B.** (2017). “Media effects: Theory and research”. *Annual review of psychology*, v. 67, pp. 315-338.
https://doi.org/10.1146/annurev-psych-122414-033608

Van-Dijk, Jan A. G. M. (1992). *De netwerkmaatschappij*. Houten, NL: Bohm Staffen von Loghum. ISBN: 978 90 31318124

Van-Dijk, Jan A. G. M. (2020). *Network society: Social aspects of new media*, 4th ed. London: Sage. ISBN: 978 1 412908672

Waisbord, Silvio (2019a). *Communication: A post-discipline*. Cambridge: Polity Press. ISBN: 978 1 509 52008 4

Waisbord, Silvio (2019b). *The communication manifesto*. Cambridge: Polity Press. ISBN: 978 1 509532193

Walther, Joseph B.; **Valkenburg, Patti M.** (2017). “Merging mass and interpersonal communication via interactive communication technology”. *Human communication research*, v. 43, n. 4, pp. 415-423.

Wellman, Barry (2002). “Little boxes, glocalization, and networked individualism”. In: Tanabe, Makoto; Van den Besselaar, Peter; Ishida, Toru (eds.), *Digital cities II*, pp. 10-25. Berlin: Springer. ISBN: 978 3 540 45636 0

Witschge, Tamara; **Deuze, Mark**; **Willemsen, Sofie** (2019). “Creativity in (digital) journalism studies: Broadening our perspective on journalism practice”. *Digital journalism*, v. 7, n. 7, pp. 972-979.
https://doi.org/10.1080/21670811.2019.1609373

Review article: Journalism innovation research, a diverse and flourishing field (2000-2020)

José-Alberto García-Avilés

Nota: Este artículo se puede leer en español en:
http://www.profesionaldelainformacion.com/contenidos/2021/ene/garcia_es.pdf

How to cite this article:

García-Avilés, José-Alberto (2021). "Review article: Journalism innovation research, a diverse and flourishing field (2000-2020)". *Profesional de la información*, v. 30, n. 1, e300110.

https://doi.org/10.3145/epi.2021.ene.10

Invited article received on December 3rd, 2020

José-Alberto García-Avilés
https://orcid.org/0000-0001-7854-3476

Universidad Miguel Hernández de Elche
Departamento de Ciencias Sociales y Humanas
Av. de la Universidad, s/n.
30202 Elche (Alicante), Spain
jose.garciaa@umh.es

Abstract

The aim of this article is to review research in media innovation through a holistic, analytical, and concise approach. Although research in journalism innovation has experienced considerable growth in recent years, theoretical, methodological, and systematic contributions have received little and fragmented attention. Three hundred and two peer-reviewed publications, in both English and Spanish, were included in the sample. The most researched areas included diffusion theory, management, organizational culture, professional profiles, business models, genres and content, tools and technology, media labs and start-ups. Other less developed areas, such as policy, methodology, ethics, or journalism education, are also discussed. Finally, a number of proposals regarding further research on journalism innovation, considering the effect of Covid-19 on the media, are discussed.

Keywords

Journalism innovation; Media innovation; Diffusion of innovation; Digital journalism; Innovation research; Distribution; Management; Organizational culture; Professional profiles; Processes; Technologies; Policies; Business models; Methodologies; Ethics; Societal impact; Review article.

Funding

This article forms part of the findings of the research project "Journalism innovation in democratic societies: Index, impact and prerequisites in international comparison (JoIn-DemoS)", funded by the Deutsche Forschungsgemeinschaft (*DFG*, *German Research Foundation*), Project-ID 438677067.
https://gepris.dfg.de/gepris/projekt/438677067

1. Introduction

The aim of this article is to review academic research in media innovation. A review article is by nature a limited and incomplete task since it is impossible to do justice to the enormous volume of academic publications in this field. The approach I adopted is necessarily holistic, analytical and concise, and aims to shed light on the evolution of research (diachronic perspective), explore the main areas of research (dialogical perspective), and propose future lines of enquiry (prospective perspective). Although research into journalism innovation has undergone considerable growth in recent years, theoretical, methodological, and systematic contributions have received little and fragmented attention, as reflected in several literature reviews (**Bleyen** *et al.*, 2014; **Dogruel**, 2015).

I explore in detail the growth of scientific research in journalism innovation, identifying key areas where significant progress has been made, as well as others that remain understudied. The most researched areas include diffusion theory, management, organizational culture, professional profiles, business models, genres and content, tools and technology, media labs, and entrepreneurial journalism. Other areas, such as policy, methodology, history, ethics, or journalism education –underrepresented in the literature– are also discussed. Finally, I make some conclusions and reflections on future research in media innovation, taking into account the effect of the Covid-19 pandemic on journalism.

Scientific works published in both English and Spanish were included as there is a considerable body of research in media innovation in Spain and Latin American countries such as Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Portugal, to mention just a few. In this way, I hope to showcase publications in journals from the Spanish, non-English-speaking academic world, such as *Ámbitos*, *Brazilian Journalism research*, *Communication and society*, *Cuadernos.info*, *Profesional de la información*, *Estudios sobre el mensaje periodístico*, *Miguel hernández communication journal*, *Observatorio (OBS*)*, *Revista mediterránea de comunicación*, *Revista de comunicación*, *Revista latina de comunicación social*, *Textual & visual media*, and *ZER.* The most cited journals in media innovation in the English-speaking world are *Convergence: the international journal of research into new media technologies*, *Digital journalism*, *International journal on media management*, *Journal of communication*, *Journal of media business studies*, *Journalism*, *Journalism & mass communication quarterly*, *Journalism practice*, *Journalism studies*, *New media & society*, *Nordicom review*, and *The journal of media innovations.* Books and chapters produced by publishers such as *Amsterdam University Press*, *Edward Elgar Publishing*, *MIT Press*, *Nordicom*, *Palgrave Macmillan*, *Peter Lang*, *Routledge*, *Sage*, *Springer*, and *Wiley* were also included in the sample.

> It is necessary to establish a clear definition of innovation in journalism and to explore the perspectives in research

The need to establish a clear definition of journalism innovation and its implications, to understand its particularities, and to explore different research traditions is not an exclusively academic requirement. In this respect, it is not surprising that many innovations are implemented in the hope of finding solutions to the problems currently facing journalism. Thus, innovation theory helps to illustrate current developments in the media sector and provides a useful framework for analyzing news organizations' transformation and the future of journalism in an uncertain post-Covid-19 scenario.

2. Methodology

The author is indebted to the many academics who have explored the fertile grounds of this discipline, outlined the main areas of study, and engaged in fruitful discussions. **Mitchelstein** and **Boczkowski** (2009) reviewed international research in digital journalism, paying special attention to innovation; **Bleyen** *et al*. (2014) provided an excellent classification of media innovations; **Dogruel** (2015) carried out a systematic analysis of innovation research in media management and economics; **Foss** and **Saebi** (2017) focused on business model innovation research; **Belair-Gagnon** and **Steinke** (2020) underlined the growing interest of journalism academics in innovation; while **Klaß** (2020) reviewed the literature on open innovation in this field of research. Their work cleared the way and provided a valuable starting point for this reviewer.

In this review, the methodological process followed these basic steps:

1) Identification of the object of study and the period to be analyzed, namely journalism and media innovation from 2000 to 2020.

2) Selection of sources: peer-reviewed publications in journals and books, both in English and Spanish. Publications that were not subject to peer review were excluded, as were conference papers, proceedings, and professional articles and reports.

3) Search in *Web of Science*, *ProQuest*, *EBSCO*, and *Google Scholar* to obtain a preliminary list of publication titles, abstracts and final descriptors, using the key words *innovation*, *journalism innovation*, *media innovation*, *newsroom innovation*, *news innovation*, and *diffusion of innovation*.

4) Management and filtering of the search results. All the article abstracts were read to identify their main topic(s) and contributions, eliminating those that did not match the original object of study. Thus, articles that exclusively referred to innovation in the service or culture industries (film, books, music, entertainment television, videogames, etc.) were excluded from the analysis. Studies that focused on innovation in platforms (e.g., *Google* or social media sites) and did not refer to journalism were also eliminated. This selection process resulted in a final sample of 302 publications.

5) Analysis of the publications. Taking into account the approaches for conducting a literature review, the analysis presented here follows that of **West** and **Bogers** (2014) and includes three methodological steps. The first consists of a systematic search, the second is based on categories defined through content analysis, while in the third, the selected articles are qualitatively analyzed, reviewing the abstracts, and, if necessary, the full text, using key structural categories and including basic descriptive information.

6) The design, structure, and writing of the article, following the contributions and conceptual frameworks established through the analysis of the publications.

3. Concept of journalism innovation

The concept of journalism innovation is vaguely defined in the academic literature. Few investigations offer a precise definition of it or provide a solid conceptual approach (**Bleyen** *et al.*, 2014, p. 29). While innovation is closely related to change, since news organizations innovate to influence their environment or to face disruptions, it should not be equated to change itself, because it is based on complex dynamic social processes that go beyond the control of single actors in diverse media contexts. A shared understanding of the concept should be the starting point for any relevant contribution to this field of research.

Although a connection between media innovations and social change is quite relevant (**Bruns**, 2014; **Krumsvik** *et al.*, 2019), theoretical frameworks on how to approach and evaluate the impact of journalism innovations on the quality of news and, in a broader sense, their influence on democratic societies remain underdeveloped. The variety of subjects, concepts and perspectives on media innovation is considerable, so we must consider the different dimensions (e.g., organizational, managerial, institutional, ethical, societal, technological) that make up its very nature and underline its interdependency (**Küng**, 2013, p. 9).

This range of perspectives is echoed in the scientific literature. Research on news innovation has been conducted based on the News Ecology Model (**Lowrey**, 2012; **Lowrey**; **Sherrill**; **Broussard**, 2019), the Actor-Network Theory (**Domingo**, 2008; **Plesner**, 2009; **Schmitz-Weiss**; **Domingo**, 2010; **Spyridou** *et al.*, 2013), Action Research (**Grubenmann**, 2016; **Wagemans**; **Witschge**, 2019), Marxist theory criticizing innovations in information and communications technologies (**Sekloča**, 2015), and the Open Innovation framework (**Aitamurto**; **Lewis**, 2013; **Klaß**, 2020; **Lewis**; **Usher**, 2013).

Dogruel (2013, pp. 36-40) highlights four basic characteristics of media innovation: its newness, its economic and social exploitation, its communicative implications, and its character as a process. This assessment of media innovations expands their role as indicators of change rather than only being catalysts for transformation processes in businesses (p. 41). **Steensen** (2009), drawing on **Boczkowski** (2004), argues that a theory of innovation in online news comprises five factors: newsroom autonomy, work culture, the role of management, the relevance of technology, and the input of innovative individuals.

Let us consider three basic definitions of media innovation provided by academics.

Pavlik (2013, p. 183) defines news innovation as

> "the process of taking new approaches to media practices and forms while maintaining a commitment to quality and high ethical standards."

According to **Pavlik** (2013), innovation is driven largely by technological advances and economic challenges along four dimensions (p. 183): (a) creating, delivering and presenting quality news content, (b) engaging the public in an interactive news discourse; (c) employing new methods of reporting optimized for the digital age, and (d) developing management and organizational strategies for a mobile networked environment.

Schmitz-Weiss and **Domingo** (2010, p. 1158) define innovation in online newsrooms as

> "the development by the online staff of new production practices, new product features or new technological tools, which can include systems, programs or applications that help in the distribution, acquisition, processing, display and storage of news and content that online journalists work with."

García-Avilés *et al.* (2018, p. 27) define journalism innovation as

> "the capacity to react to changes in products, processes and services through the use of creative skills that allow a problem or need to be identified, and to solve it through a solution that results in the introduction of something new that adds value to customers and to the media organization."

These two last definitions have much in common. Both include interrelated elements ("production practices, product features, technological tools", "products, processes, services") and link innovation to certain results in existing processes ("distribution, acquisition, processing, display and storage of news", "the introduction of something new that adds value to customers and to the media organization"), emphasizing how a company captures a share of the *value generated through innovation*. Therefore, we could argue that an essential aspect of media innovation lies in its transformative value, which modifies and improves the organization's performance.

The study of journalism innovations should go beyond media practices and technologies to include essential areas such as societal change. **Barnhurst** (2013) criticizes the concept of innovation itself for being overly concerned with technology, stressing the role of the public as a vital concept for developing public service journalism (pp. 218-219). **Barnhurst** (2013) recommends that journalists distance themselves from product innovation and focus on serving the public. His arguments underline the importance of social innovation discussed by other scholars (**Bruns**, 2014; **Khajeheian**; **Tadayoni**, 2016; **Storsul**; **Krumsvik**, 2013). As **Bruns** (2014, p. 24) states,

> Theoretical frameworks on how to approach and evaluate the impact of journalism innovations on democratic societies remain underdeveloped

> "media practices, social practices, and society itself are inherently and inextricably entwined in contemporary mediatized society, however – a change to any one of these components will therefore necessarily also cause changes to the others. Innovation in media practices is, then, inevitably also a source of social and societal change."

In journalism, no innovation is possible without the essential component of ethics, because the very activity of reporting itself is based on a commitment to truth and ethical standards (**García-Avilés**, 2016). Journalists initially tend to frame innovations as threats to ethical principles, as something that must be resisted on moral grounds; however, such resistance can easily become an impediment to thinking productively about innovation (**Singer**, 2014). As **Singer** (2014, p. 78) writes,

> "the ethical compromises that journalists fear – not entirely without justification – stem primarily from pressures that originate in a shortage of money, not an excess of innovation."

However, to date little attention has been given to the ethics of journalism innovation.

The lack of positive results in the media market has led to a reasonable criticism of academia's emphasis on innovation. Some authors argue that a focus on innovation obscures the structural, historical, and cultural conditions that exert pressure on journalism (**Creech**; **Nadler**, 2018) and thus,

> "innovation becomes a mode of civic being that assumes the conditions of the market should guide public life" (p. 13).

An idealized notion of media innovation, often coupled with technologically deterministic discourses, leads to the rejection of normative notions of journalism in order to align with market-oriented and industry-wide business trends. This conceptual vagueness leads to a somewhat chaotic vision of journalism's future (**Creech**; **Mendelson**, 2015).

We argue that, in addition to more research, a deeper, evidence-based theoretical framework is needed regarding

> "the actors, dynamics and factors involved in the processes and theories that acknowledge the changing nature of journalism" (**Schmitz-Weiss**; **Domingo**, 2010, p. 1158).

Social processes may interact with the quality certification mechanisms of innovative features in media products, in what **Schweizer** (2003) calls "stylistic innovations", since

> "aesthetic enjoyment as a key part of consumer satisfaction arises from the recognition of stylistic differences" (p. 21).

To analyze these complex interdependencies the field of journalism innovation requires a combination of normative theories regarding the media (**Christians** *et al.*, 2009) and

> "theoretical and empirical approaches from economic and social innovation theory as well as media-specific frameworks" (**Dogruel**, 2014, p. 62).

The thesis that media innovations are only viable in the long term if they contribute to the quality of news (**Pavlik**, 2013) has not been sufficiently empirically tested yet. In this regard, journalism innovation should no longer focus only on product- and technology-related aspects, but also on news quality and social impact. Besides their economic value, media innovations have an influence on society, organizations, and citizens.

> The study of journalism innovations should go beyond media practices and technologies to include essential areas such as societal change

4. Typologies of media innovation

Journalism innovation explores changes in several aspects of the media landscape – from the development of new platforms to novelties in content production, distribution, and commercialization. **Francis** and **Bessant** (2005) identify four ways of targeting innovation: *Product*, *Process*, *Position* and *Paradigmatic Innovation*, and define them as wide categories with blurred boundaries. **Storsul** and **Krumsvik** (2013) list ten key factors which influence media innovation: (1) technology, (2) market opportunities and user behavior, (3) behavior of competitors, (4) regulation, (5) industry norms, (6) company strategy, (7) leadership and vision, (8) organizational structure, (9) capacity and resources, and (10) culture and creativity.

In traditional Schumpeterian literature, there is general agreement that innovations can be either "radical" or "incremental" according to the degree of change they bring about in product or service value creation (**Storsul**; **Krumsvik**, 2013). Both authors provide an overview of the conceptualization of innovation from economic, management and constructivist approaches. Product innovation encompasses both technologies and services offered by media organizations; process innovation incorporates changes in the ways that products or services are created and delivered, such as new systems of producing, packaging or distributing products, as well as organizational changes in the company; position innovation refers to changes in the framing of products and services, such as in brand identity, strategic positioning or addressing new target audiences; and paradigmatic innovation examines changes in an organization's basic orientation or mindset, such as the restructuring of its strategies of value creation and business models.

Lindmark *et al.* (2013, p. 133) propose a typology of media innovation along two key dimensions:

1. Type of innovation: (1) a content innovation that can either be in the core (a theme or message) or in the form (a new stylistic feature); (2) a consumption/medium innovation (a new way of consuming content); (3) a production and distribution innovation (a new means of creating, producing, reproducing, distributing or showing content); and (4) a business model innovation (a new business model, including the reorganization of an industrial sector).

2. Temporal aspect (maturity of innovation, closeness to market): long-term, medium-term, and short-term.

Belair-Gagnon and **Steinke** (2020, p. 7) define six mechanisms that generate innovation: participative (open, distributed, networked, and collaborative); normative (friction, resistance, and normalization); disruptive (quick, fragmented change); diversity (gender, race, disabilities, etc.); emotive (humor, fun, and play); and experimental (disruptive). Both authors (p. 14) argue that studies

> "cast innovation as a means for organizations to improve work methods, foster compelling interactions with audiences, organize and align talents and assets, create complementary products and services, and connect with others to create value."

Hess and **Waller** (2020a) advocate for a six-dimensional approach to shaping innovation for regional news organizations that highlights the connections between digital, social, cultural, political, economic, and environmental concerns.

These approaches show that although most of the literature does not relate to a unifying framework of journalism innovation, a growing body of studies do consider a wide set of elements and provide a valuable framework to define the main fields and objects of research.

5. Research methods: an underdeveloped field

Media innovation seems to be ill-defined and poorly captured by purely quantitative statistical methods (**Bleyen** *et al.*, 2014), while the most common methodologies are not themselves very innovative. Research in this field is fragmented because of the existence of different contexts, definitions, and potential success factors (**Habann**, 2008). Issues such as the policy and regulatory context of the media sector, market composition, or technological development are rarely examined in empirical studies. Specific media innovations or case studies are often analyzed in one country, usually based on interviews of small samples of individuals. However, macro-level factors and their influence are barely studied, making it difficult to make systematic generalizations or rigorously develop theories. However, quantifying both research and development expenditure (innovation input) and the actual innovation volumes (innovation output) in terms of individual factors and overall performance cannot simply be based on parameters such as the number of patents registered in a sector during a particular period (**Bleyen** *et al.*, 2014). Therefore, methodology design deserves special attention to enable solid, comparable research that builds upon common scientific knowledge on media innovation.

Habann (2008) examines the foundations of research methods in product innovation. He links product innovation to economic profitability and several intangible assets such as brand image, company skills, and customer knowledge, which may contribute to the success of an innovation. Thus,

> "it might be appropriate to measure success by the extent to which defined goals have been met by the innovation project, as perceived by responsible managers" (2008, p. 69).

Carvajal *et al.* (2015) develop a methodological tool to investigate models of journalism production, distribution, organization and commercialization, and systematically analyze how they influence a market. They outline a system of analysis based on sample selection, the definition of innovations in key areas, and quantitative and qualitative analysis. This methodology was applied in a study of the Spanish media that concluded that most innovations occurred in the areas of product, distribution, and interaction with the audience (**De-Lara** *et al.*, 2015; **García-Avilés** *et al.*, 2018). While most innovative initiatives were incremental with gradual improvements of existing products or services, a few radical innovations were implemented, mainly by digital-only news outlets.

According to **Steensen** (2013), the prevailing discourse of innovation and change should be complemented by competing perspectives of transformation and practice to better understand how and why new media and innovative practices develop. **Trappel** (2015, p. 29) proposes carrying out interdisciplinary research on communication innovation to evaluate improvements or deterioration in democratic values such as freedom, equality, diversity, solidarity and participation, with a view to balancing industry research, which focuses on the commercial success of innovations.

Studies on media innovations cover three basic levels (**Dogruel**, 2013, p. 40):

a) The macro-level, which explores institutional policies, market factors and the socioeconomical context (**Túñez-López** *et al.*, 2019, **Valero-Pastor**, 2019; **Vázquez-Herrero** *et al.*, 2020) to examine the impact of innovation policies in specific areas, such as the Flemish broadcasting sector (**Lindmark** *et al.*, 2013). Innovation policies can help the media industry meet development needs. In most European countries, innovation subsidies are designed to finance only time-limited projects with specific deliverables aimed at improving the situation of news organizations (**Van-Kranenburg**, 2017). Although the need to reform media policies is widely acknowledged by policy makers, there is no consensus as to what measures should be implemented (**Van-Kranenburg**, 2017).

b) The medium-level, which focuses on companies as agents of innovation in a market or country. Studies include the analysis of management, organizational aspects and structures, and the implementation and diffusion of innovations in news organizations (**Baumann**, 2013; **Colussi**; **Gomes-Franco**; **Melani**, 2018; **McKelvie**; **Wiklund**, 2008; **Nel**; **Milburn-Curtis**; **Lehtisaari**, 2020).

> Studies of media innovations cover three basic levels: macro, medium, and micro. Ideally, combine them holistically

c) The micro-level, which deals with individual agents of innovation (workers) and specific units, such as newsrooms, labs and start-ups, that have been identified as drivers of media innovation (**Carlson**; **Usher**, 2016; **Westlund**; **Lewis**, 2014).

It is very rare to find studies that holistically combine all three levels of analysis.

6. The historical development of journalistic innovations

Research on the history of journalism innovation tends to focus on legacy news organizations and on the disruptive role of technology, highlighting how newsrooms responded to, and resisted, change (**Prenger**; **Deuze**, 2017). The pioneers of innovation, understood as a group of journalists that incorporated new organizational forms and experimental practices ahead of mainstream changes, also played a role in the redefinition of journalism and its structural foundations (**Hepp**; **Loosen**, 2019). Legacy media, with traditional routines, products, and business models, have taken longer to realize that digital transformation was needed to face the disruption and that innovation was an opportunity for sustainability (**Ashuri**, 2013; **García-Avilés**; **Martínez-Costa**; **Sádaba-Chalezquer**, 2016; **García-Avilés**; **Meier**; **Kaltenbrunner**, 2017; **Santos-Silva**, 2020). Accordingly, a number of longitudinal studies have explored particular subjects in the development of legacy media innovations, such as the adoption of paywalls by online news outlets since the 1990s as a case of "retro-innovation" (**Arrese**, 2016), the ongoing processes of technological innovation in legacy media through the development of blogs and other 'Web 2.0' tools (**Nielsen**, 2012; **Ostertag**; **Tuchman**, 2012) or journalists' use of *Twitter* and the impact of news organizations' social media policies (**Chadha**; **Wells**, 2016; **English**, 2016; **Oelrichs**, 2020).

The rise of digital-only news outlets in the 2010s was a sign of the maturity of the online media market and contributed to the digital transformation of the industry (**García-Avilés**; **Arias-Robles**, 2016a). Some of these news outlets succeeded because they were able to connect with users' interests, promoted a more flexible workflow, and decentralized production and distribution systems (**Sádaba-Chalezquer**; **García-Avilés**; **Martínez-Costa**, 2016). Many digital-only players focused on experimentation and innovation from an early stage and adapted to the disruptive environment quicker than legacy media, as they could take fewer risks and their learning process was faster (**Kaltenbrunner**; **Karmasin**; **Kraus**, 2017).

A number of innovation studies focused on how technological tools and digital technologies changed news production and the consequences for journalistic work, examining their impact on news practices, hierarchies, and relationships in sometimes disruptive ways. As **Steensen** argues, online journalism research is

> "dominated by a discourse on technological innovation" (2011, p. 11).

Academics have examined audience fragmentation and structural limits on media innovation (**Picard**, 2000), technology-driven innovation and its practical implications (**Spyridou** *et al.*, 2013) and whether entrepreneurial journalism and news start-ups are successful (**Sommer**, 2018; **Usher**, 2017). In his classic study on newsrooms' adoption of online technologies, **Boczkowski** (2004) demonstrates how non-technological organizational and professional factors complicate journalism's conflicting relationship with technology. However, journalists have reacted to technological innovation in complex ways, from fear of disruption to reinvention (**Meier**; **Bracker**; **Verhovnik**, 2017; **Powers**, 2012).

Innovation is often defined in terms of technology and business and omits the socio-cultural component. Interactions between content and technology in the media industries might help explain differences in the receptiveness of businesses towards new technological opportunities (**Kannengießer**, 2020) in the case of public service media (**Fernández-Quijada** *et al.*, 2015; **Lowe**; **Stavitsky**, 2016) or in specific national markets, such as Colombia (**García-Perdomo**; **Magaña**, 2020). Some studies adopt a technology-oriented perspective that regards technological innovation as the driving force of the changes in journalism (**Moreira**, 2017). In certain news organizations, innovation is used to mask economic and structural problems, rather than being framed as a solution to these problems (**Evans**, 2016). Digital innovation is usually driven by staff with experience and motivation (**Schmitz-Weiss**; **Wulfemeyer**, 2014).

Technology and content interact strongly with each other and should be linked to elements such as management, product, newsroom culture, and social engagement (**Evans**, 2016; **García-Avilés**, 2017). In their review of studies about online news production, **Mitchelstein** and **Boczkowski** (2009, p. 566) describe "a process of innovation as the interplay between technology and local contingencies", including people and organizational contexts that shape changes in online journalism. Innovation drives visions of journalism's future (**Valanto**; **Kosonen**; **Ellonen**, 2012), often displaying a fixation with anticipating technological change and emerging business models while tending to overlook journalism's sustained democratic value (**Creech**; **Nadler**, 2018, p. 194).

Considering the vast amount of literature on technological innovations in journalism, one could be under the impression that the only possible form of innovation lies in the adoption of such technologies. In this regard, most academics neglect to explore *why* news organizations incorporate digital media in their work and products. Rather, they focus on *how* the incorporation takes place (the *process*) and the *results* of doing so.

7. Diffusion of innovations

According to the seminal work of **Rogers** (2003, p. 5), diffusion is

> "the process by which an innovation is communicated through certain channels over time among the members of a social system."

Diffusion of Innovations (DOI) theory in media research is conceptualized as a process that includes structural and practical factors derived from professionals' inputs in different areas of production (**Lund**, 2008; **Micó**; **Masip**; **Domingo**, 2013). **Rogers** (2003) proposed an 'Innovation-Decision Process Model' to study the stages of adoption, which is essentially an information-seeking and information-processing activity in which individuals attempt to reduce uncertainty about the advantages and disadvantages of a specific innovation. Innovations emerge not only as a response to threats of instability in the media market, increasing industry competition and technological disruption; interactive audiences and social media also play a decisive role in helping reduce uncertainty and fostering early adoption (**Atkin**; **Hunt**; **Lin**, 2015; **Garrison**, 2001; **Lievrouw**, 2006).

The continuum of innovativeness (**Rogers**, 2003) is divided into five adopter categories: innovators, who introduce the innovations; early adopters, who are the first to implement them; early majority, the large number of individuals who adopt the innovations fairly quickly; late majority, who adopt them later, and laggards, who lag behind the rest. These categories are ideal prototypes based on observations of reality and are designed to make comparisons possible. **Zhou** (2008) proposes four adoption categories (voluntary adopters, forced adopters, resistant non-adopters, and dormant non-adopters), according to the voluntary nature of organizational members' innovation decision-making. As **García-Avilés** (2020b) argues, DOI researchers should be careful in analyzing the impact of internal communication, the role of institutional policies, the effects of the managerial strategies, and the importance of the installed learning inertia (**Zhou**, 2008).

> An innovative learning culture encourages fresh and creative ideas to experiment with in newsrooms

Many elements, including the availability of information technology, adopters' past experiences, management support, availability of change agents, and communication process (**Chua**; **Duffy**, 2019; **Ekdale** *et al.*, 2015; **Singer**, 2004; **Wood-Adams**, 2008) explain the adoption of innovation decisions in news organizations. According to **Zabel** and **Telkmann** (2020), certain organizational drivers are especially important for the successful adoption of technological innovations, such as top management support, existence of an innovation champion, alignment with the company's innovation strategy, cooperation with internal IT and long-term planning for the accumulation of sustainable expertise within the companies. **Lund** (2008) emphasizes the significance of communication in DOI processes. **Meier**'s (2007) study of how convergence as practice was diffused in the news agency *Austria Presse Agentur* also highlights the importance of managerial communication in eliminating organizational barriers.

Porcu (2017) studied innovative learning cultures within legacy media newsrooms and argued that the scarcity of academic attention to learning and innovation processes of journalists was

> "the biggest gap in the media innovation literature" (p. 12).

Research shows that there are simmering tensions between journalism's organizational culture and the professional subcultures inherent in innovation. **Paulussen** *et al.* (2011, pp. 8-13) view the implementation of innovations as being heavily personality-driven and dependent on the willingness and agency of staffers. In this context, the DOI model in news organizations proposed by **García-Avilés** *et al.* (2019) considers specific factors which might help advance or hinder innovative practices within media companies and explores how innovations are embraced by early adopters (**García-Avilés**; **Carvajal**; **Arias**, 2018).

A growing body of literature relates to how journalism education programs address innovation and entrepreneurial initiatives in relation to changing industry circumstances, long-standing conceptualizations of occupational norms and curricular improvements (**Drok**, 2013; **Manfredi-Sánchez**, 2015; **Manfredi-Sánchez**; **Ufarte-Ruiz**; **Herranz-de-la-Casa**, 2019; **Pavlik**, 2013; **Singer**; **Broersma**, 2020). Reference is made to innovation in communication studies (**Chasi**; **Rodny-Gumede**, 2020), teaching data journalism (**Hewett**, 2016) and fostering creativity in digital journalism programs (**Witschge**; **Deuze**; **Willemsen**, 2019). However, although journalism students agree with the idea of innovation and see its value, they define change predominantly in terms of technology rather than more substantive cultural transformation (**Broersma**; **Singer**, 2020), while professionals demand more focus on journalism skills and standards (**Ferrucci**, 2018). In the Latin American context, a significant gap exists between academics and the profession regarding the definition of innovation and what it means to be innovative (**Schmitz-Weiss** *et al.*, 2020).

> Dogruel argues that innovation encompasses an entire cycle, from its invention to its diffusion or implementation, and calls for an integrated approach that aligns with all the stages of the innovation cycle

Dogruel (2014; 2015) regards literature on media innovation to be limited, with its narrow focus on diffusion, adoption and acceptance of the final technological product that enters a market or is implemented by a news organization because it largely ignores the design and development stages of innovation. She argues that innovation encompasses an entire cycle, from its invention to its diffusion or implementation, and calls for an integrated approach that aligns with all the stages of the innovation cycle.

8. Media innovation management

The study of innovation management is crucial because it helps explain how the diffusion of innovations shapes the communication sector and provides a sustainable future (**Dal-Zotto**; **Van-Kranenburg**, 2008). However, a meta-analysis on innovation and media management studies found that most scholars did not directly address media management and focused on the use of technology (**Sylvie**; **Schmitz-Weiss**, 2012, p. 199). The emphasis of research on technological innovation reflects the fact that the media is one of a number of industries facing the emergence of potentially disruptive technologies.

Researchers have explored innovation through the lens of media management theory (**Mierzejewska**, 2011), which includes variety of perspectives:

a) Product innovation, which regards products, technologies, and innovations as a strategic element in the company's financial performance (**Gershon**, 2016);

b) Consumer behavior, examining the ways users consume the media and how they benefit from their consumption (**Schoder** *et al.*, 2006);

c) The effects of adopting innovations on organizations and employees (**Gholampour-Rad**, 2017; **Wood-Adams**, 2008). In this regard, **Järventie-Thesleff**, **Moisander** and **Villi** (2014) found that management practices in print media outlets tend to be geared toward supporting incremental innovations, whereas practices in online platforms are oriented toward pursuing more radical innovations;

d) Leadership theory, in order to make strategic decisions at a time when sectors such as technology and telecommunications companies are driving innovation (**Küng**, 2013). The upper echelons of news organizations therefore need to update their knowledge (**Appelgren**; **Nygren**, 2019), including internal communication and coordination among organizational units with structures and processes that facilitate strategy, creativity, and innovation (**Gade** *et al.*, 2018; **García-Avilés**, 2012; **Küng**, 2011).

Management strategies to drive institutional change, specifically regarding the professional journalist and 'news nerds', tend to give importance to data, analytics, and platform-related positions in order to boost competitiveness (**Kosterich**, 2019). Professionals are motivated to develop new skills and competencies as well as opportunities to redesign journalistic products and practices (**Malmelin**; **Virta**, 2016). **Leenders**, **Farrell** and **Van-der-Wurff** (2016) found that what is important for the capacity to innovate is the degree to which media professionals identify with the orientations of the company they work for. Along this line, **Dogruel** (2015) discusses theoretical and empirical concepts of innovations from a media management and media economics perspective and finds

> "an emphasis on product and process innovations and a focus on micro- and meso-level approaches" (p. 153).

When changing the newsroom mindset and fostering innovation, management must engage in value-chain thinking and make story development a process less hierarchically driven and more networked (**Sylvie**, 2017, p. 102). **Krumsvik** (2015) explained the importance of digital skills necessary in process innovation and highlighted the conflict between the product innovation of online news features and the process innovation of multi-platform news production. Television managers from a broad cross section of small, medium, and large markets in the United States identified three primary areas in which they say they are innovating, including live reporting, social media, and on-demand television services (**Imre**; **Wenger**, 2020). According to both authors, the motivating factors for media innovation were audience preferences, economic drivers, and corporate influence. In addition, new technologies drove the diffusion process in local television news reports (**Adornato**, 2014).

Media organizations must be capable of managing the practices and processes in order to convert creative ideas into innovations in ambidextrous organizational settings. The role of management in providing supportive conditions for implementing innovations and balancing ambidextrous tensions is essential (**Virta**; **Malmelin**, 2017). A management style based on 'media Googlization' implies a strong shift for media companies, implementing processes that aim to take advantage of digital data, traffic, and advertising (**Badillo**; **Bourgeois**, 2020, pp. 190-191). However, according to both authors, these processes are accompanied by limited innovation because the priority has not been to fuel creativity in the production of quality news products.

The barriers and obstacles to innovation in journalism are closely related: insufficient capacity to innovate in basic training, a professional culture somewhat skeptical about innovation, and an educational landscape that does little to promote innovation lead to difficult conditions for the financing of journalistic innovations (**García-Avilés** *et al.*, 2019). At the same time, the profession is increasingly associated with precarious working conditions, which can make it less attractive in terms of attracting the most talented managers (**Küng**, 2011) and might have a negative impact on the innovative capacity of key players in the industry.

The role of managers is essential in creating the conditions that drive innovation and mitigate tensions

9. Organizational culture and new professional profiles

The impact of organizational culture on innovation processes across media outlets has been widely acknowledged (**Gade**; **Perry**, 2003). Regardless of company size, there tends to be an interrelation between organizational culture and innovative performance (**Van-der-Wurff**; **Leenders**, 2008). However, newsroom culture is a complex and intangible issue that defies standard measurement criteria. Journalists rely on a deeply embedded professional culture when adopting the innovations and projects implemented in their newsrooms (**Kramp**; **Loosen**, 2017; **Ryfe**, 2009a; 2009b). Intra-organizational collaboration between journalists, managers and technologists when launching innovations is difficult to accomplish in legacy media with traditional organizational cultures (**Westlund**; **Krumsvik**, 2014), while a long-established fear-driven defensive culture among journalists often becomes a barrier to the development of innovation in online news (**Nguyen**, 2008).

One of the core disruptive effects of media innovations is the evolution of professional identities, which results in more complex role relationships that are complemented by a reconfigured set of values and practices. Changes in journalistic practice sometimes involve the gradual transposition of previous schemas to renewed resources and procedures (**Raetzsch**, 2015), or the incorporation of journalistic standards that become more relevant, such as transparency (**Koliska**; **Chadha**, 2018). Both individual actors and structural elements can help overcome inertia and reinforce newsroom innovation (**Paulussen**, 2016; **Steensen**, 2009). Journalists tend to evaluate innovations based on their perceived potential to improve the quality of journalistic work, thus fostering a culture of collaboration (**Paulussen**; **Geens**; **Vandenbrande**, 2011). Indeed, coordination and collaboration between the various departments, in particular the Information Technology department, is increasingly linked to the development of innovation in the media (**Westlund**; **Krumsvik**; **Lewis**, 2021). However, conflicts emerge between news intrapreneurs, who adopt a logic of experimentation, audience orientation, and efficiency-seeking, and managers' logic of prioritizing news workflows, formats, and professional autonomy (**Belair-Gagnon**; **Lewis**; **Agur**, 2020).

Studies show that although a multi-platform strategy is effective in overcoming procedural inertia and maximizing the innovative capacities of newsrooms (**Lischka**, 2015), innovating in digital-first newsrooms is complicated and fuels internal tensions (**Hendrickx**; **Picone**, 2020). News processes and routines have been fundamentally altered to meet demands for multimedia, interactivity, and immediacy (**Groves**; **Brown**, 2020). Innovative outlets tend to increase collaboration among professionals, facilitate access to qualified knowledge sources, make workflows more flexible and allow interdepartmental cooperation (**Valero-Pastor**; **Carvajal-Prieto**, 2019; **Valero-Pastor**; **Carvajal-Prieto**; **García-Avilés**, 2019). **Lewis** and **Usher** (2013) consider how the characteristics of open-source culture are seeping into newsroom practice as journalists and technologists increasingly work together in developing innovative projects.

A newsroom's social climate that stimulates 'outside the box' thinking has been conceptualized by **Porcu** (2017) as an innovative learning culture, which is defined as a learning culture in the organization that triggers and fosters novel and creative ideas to experiment with and to learn from. Through an innovative learning culture framework, **Porcu**, **Hermans** and **Broersma** (2020) explored how news organizations experience innovation processes and how they can enhance a newsroom's resilience. The creative process is at the heart of innovation and requires skills as well as a specific understanding of the contexts in which it is applied (**Küng**, 2008), whether in the process of using social media as news sources (**Von-Nordheim**; **Boczek**; **Koppers**, 2018) or other journalistic practices.

As newsrooms adapt to editorial models and audience demands, new professional roles emerge. There is a growing need for 'adaptative journalists' open to experimentation in multidisciplinary teams where collaboration between journalists and technologists is commonplace (**Palomo**; **Palau-Sampio**, 2016), such as innovative fact-checking units (**Graves**; **Nyhan**; **Reifler**, 2016), web analytics (**Lamot**; **Paulussen**, 2020) and data journalists (**Appelgren**; **Nygren**, 2014; **De-Maeyer** *et al.*, 2015; **Zhang**; **Feng**, 2019). One of the great deterrents to the development of data journalism in small newsrooms is the consideration of this specialty as a 'ghetto' (**Arias-Robles**; **López-López**, 2020). According to this view,

> "innovation, aesthetics or the opinion of the specialists is often more important in data journalism than the true effects and profitability of the contents" (p. 7).

Media companies are hiring professionals with backgrounds in computing, engineering, and statistics (**Holton**; **Belair-Gagnon**, 2018). These 'strangers' to journalism shape news production and

> "may have different levels of influence on journalistic norms and practices based on the innovations they adopt and their positions within professional journalism" (**Holton**; **Belair-Gagnon**, 2018, p. 76).

The role of some departments, such as web analytics, might be controversial in some instances (**Belair-Gagnon**; **Holton**, 2019). Journalists and technologists also collaborate through organizations such as *Hacks/Hackers* (**Lewis**; **Usher**, 2014).

In computer-based events (journalism hackathons), participants create product prototypes, enabling institutional stakeholders and the public to collaborate. In some instances, journalism hackathons operate as a community-based laboratory for translating open data from practitioners to the public (**Boyles**, 2017).

Gynnild (2014a) alludes to the liquid boundaries between journalists and programmers, pointing out

> "the need for an innovative mindset amongst all news professionals" (p. 727).

She found that computational exploration that challenges the traditional ideas of journalism also triggers innovative thinking and behavior among the actors themselves. According to **Lewis** and **Usher** (2016), programmers play a prominent role in newsrooms, where they incorporate skills that promote hacking, openness, and transparency,

> "understanding journalism not as journalists but as intelligent consumers of information" (p. 14).

Therefore, innovation research should consider the complexity of intertwined contextual features, the intersection of news and technology, and the changing professional context (**Konow-Lund**; **Hågvar**; **Olsson**, 2019).

10. Beyond traditional business models

Researchers have increasingly explored how media organizations can develop revenue models beyond traditional income sources and how funding for high-quality journalism might be secured in a time of increasing uncertainty (**Villi**; **Picard**, 2018). The Covid-19 pandemic has deepened the economic crisis and alerted publishers to the urgent need to diversify sources of income and to seek new models. In this context, business model innovation has become consolidated as a promising field to promote value and to create, or retain, competitive advantage in the media sector (**Evens**; **Raats**; **Von-Rimscha**, 2017). However, in their exhaustive review of business model innovation research, **Foss** and **Saebi** (2017, p. 221) conclude that

> "the literature is characterized by conceptual ambiguity and disconnected research efforts."

Research has focused on alternative revenue models, including paywalls (**Arrese**, 2015; **Sjøvaag**; **Krumsvik**, 2018), micropayments (**Graybeal**; **Hayes**, 2011), business alliances (**De-Lara-González**; **Santos-Maestre**, 2019; **Mütterlein**; **Kunz**, 2017), users' personal data (**Bechmann**; **Bilgrav-Nielsen**; **Jensen**, 2016), customization, resource development, and dialogue-based marketing communication (**Cestino**; **Berndt**, 2017), customer relationships (**Barland**, 2013), public funding for local journalism (**Stonbely**; **Weber**; **Satullo**, 2020) and crowdfunding (**Carvajal**; **García-Avilés**; **González**, 2012). In addition, researchers have also studied the role of audience participation in business models (**Pettersen**; **Krumsvik**, 2019), commercial strategies for online and multiplatform distribution (**Doyle**, 2013), and the use of external sources of financial aid, such as *Google*'s *Digital News Fund* initiatives (**Nunes**; **Canavilhas**, 2020) or the *Knight News Challenge* grant-funding contest (**Lewis**, 2012; 2014). Studies have also discussed the role of media entrepreneurs in promoting innovative business models (**Casero-Ripollés**; **Cullell-March**, 2013; **Compaine**; **Hoag**, 2012). In this regard, **Küng** (2015, p. ix) examines the success of key players in digital news and highlights the "extremely coherent elements" of their successful business models.

It should not be overlooked that journalism is already underfunded from a welfare economy perspective, and this problem cannot be remedied by innovation alone. Nevertheless, a carefully designed and evidence-based innovation policy is a potentially powerful instrument to increase the journalistic and economic performance of news organizations and to ensure their sustainability. **Günzel** and **Holm** (2013) found that although most media companies have innovated in certain elements of their business models, innovation approaches often remain uncoordinated. According to **Lehtisaari** *et al.* (2018), newspaper companies

> "have not been very innovative when it comes to media production, business models, sources of funding, new models for content distribution" (p. 1038).

Cestino and **Matthews** (2016) analyzed the persistence of the newspaper business model and stress that 'path un-locking' entails innovation in an organization's value creation logic. **Wikström** and **Ellonen** (2012) claim that media organizations have failed to restructure their business models and develop new capabilities to deal with social media platforms. Business model experimentation can be helpful to organizations considering opening and establishing the required linkages, e.g., technologies or social innovations that call for business solutions, experiments with alternative revenue sources and collecting additional customer data (**Holm**; **Günzel**; **Ulhøi**, 2013).

Recent research has examined innovative business models developed in Great Britain (**Nel**, 2010), Finland (**Lindén**, 2015), Norway (**Sjøvaag**; **Krumsvik**, 2018), Brazil (**Capoano**, 2018; **Vieira-de-Araújo**, 2019), United States (**Villi** *et al.*, 2019), Scandinavia and the US (**Lehtisaari** *et al.*, 2018) and Spain, where studies have analyzed sport news outlets (**Manfredi-Sánchez**; **Rojas-Torrijos**; **Herranz-de-la-Casa**, 2015) and the relationship between commercialization and organization (**García-Santamaría**; **Clemente-Fernández**; **López-Aboal**, 2013). Studies on journalism economics and innovation in geographical areas such as Latin-America (**Harlow**; **Salaverría**, 2016; **Salaverría** *et al.,* 2019; **Schmitz-Weiss** *et al.,* 2018), Central America (**Harlow**, 2018), and Africa (**Paterson**, 2019) reveal a promising field of research.

11. Genre and content innovation

Innovation in media narratives has not received as much attention as other fields, such as technology, management, organization, or commercialization. Practitioners argue that innovation should not exclusively be based on production technology but also include news genres and storytelling (**García-Avilés**; **Carvajal**; **Comín**, 2016, p. 187). A genre is considered innovative if it becomes an efficient way of designing content adapted to the story, thereby achieving success in terms of audience, advertising revenue, brand image or prestige for the outlet (**García-Avilés**, 2020a). News organizations are launching innovative online genres that allow the exploration of creative possibilities through different storytelling techniques and investigative methods (**Konow-Lund**, 2020) that sometimes help to connect with younger audiences (**Emde**; **Klimmt**; **Schluetz**, 2016).

Narrative innovations are rooted in the use of expressive resources, amplifying long-form explanations and the ability to connect with digital audiences, and maximizing the interactive, hypertextual and immersive possibilities of the medium (**Røe-Mathisen**; **Morlandstø**, 2018). For instance, media organizations are increasingly experimenting and innovating in niche areas, such as sports journalism (**Rojas-Torrijos**, 2013; 2014), hyperlocal and community news (**Harlow**; **Chadha**, 2018; **Heckman**; **Wihbey**, 2019; **Van-Kerkhoven**, **Bakker**, 2014), political journalism (**Brookes**, 2018), or in the fight against hoaxes and misinformation (**Valarezo-Cambizaca**; **Rodríguez-Hidalgo**, 2019). Researchers have also investigated how innovation is implemented in journalists' blogs (**Mitchelstein**; **Boczkowski**; **Wagner**, 2017), newsletters (**Hendrickx**; **Donders**; **Picone**, 2020; **Rojas-Torrijos**; **González-Alba**, 2018), the use of links in hypertext (**Arias-Robles**; **García-Avilés**, 2017), and op-eds pages (**Socolow**, 2010).

> News organizations are launching innovative online genres that allow the exploration of creative possibilities through different storytelling techniques and investigative methods

Research on innovation in news narratives has proliferated, with studies that focus on genres produced for mobile devices (**Palacios** *et al.*, 2016), storytelling in the visualization of information and data journalism (**Appelgren**; **Nygren**, 2014; **Engebretsen**; **Kennedy**; **Weber**, 2018), journalistic genres in *Twitter*, *Instagram* and other social media platforms (**Chadha**; **Wells**, 2016; **García-Avilés**; **Arias-Robles**, 2016b; **Rojas-Torrijos**; **Panal-Prior**, 2017), transmedia narratives (**Peñafiel-Sáiz**, 2016; **Trillo-Domínguez**; **Alberich-Pascual**, 2020), multimedia long-form stories (**Ritter-Longhi**; **Flores**, 2017; **Vázquez-Herrero**; **Negreira-Rey**; **López-García**, 2019), interactive documentaries or docuwebs (**Parra-Valcarce**; **Martínez-Arias**, 2019; **Vázquez-Herrero**; **Negreira-Rey**; **Pereira-Fariña**, 2017) and newsgames, which use game-based mechanics and playful thinking to promote learning about events through users' interaction (**García-Ortega**; **García-Avilés**, 2018; **Plewe**; **Fürsich**, 2020) and can add a potentially more powerful meaning to news (**Dowling**, 2020).

Innovations have been examined in long-form pieces that incorporate a creative use of audio in podcasts (**Menduni**, 2007), the production of immersive 360º video, which allows the user to experience and be directly involved with the subject matter (**Benítez-de-Gracia**; **Herrera-Damas**, 2018; **Lajqi**; **Lischka**, 2020), broadcasting live streaming tools that engage with audiences in newscasts (**Mancebo-García**, 2016), online genres which combine stories for social media, web and television (**García-Avilés**, 2020a), investment in online video news (**Kalogeropoulos**; **Nielsen**, 2018), *YouTube* as a news dissemination channel (**Santín**; **Álvarez-Monzoncillo**, 2020), interactive infographics and visual representations (**Toural-Bran** *et al.,* 2020), immersive virtual reality reports (**Mabrook**; **Singer**, 2019) and augmented reality in online news (**Meneses-Fernández**; **Martín-Gutiérrez**, 2013).

In short, as can be seen in this compilation of innovation studies, it is a fascinating scenario which continues to grow and diversify. In addition, users often become prosumers who participate in the creation of content and get involved in immersive experiences (**Pérez-Seijo**; **Benítez-de-Gracia**, 2018). As users' needs and preferences evolve, broadcasters must adapt and develop storytelling formats, distribution channels, business models and users' opportunities to interact with content (**García-Avilés**, 2020a; **Owens**; **Dillman-Carpentier**, 2004; **Puijk**, 2015). As **Mabrook** and **Singer** (2019, p. 2100) put it,

> "the time is ripe for journalism studies scholars to engage with the implications of this immersive, multi-faceted, and emotionally compelling innovation for the product and practice of journalism."

A key challenge, nevertheless, is to make content relevant and useful for users without compromising the values of truthfulness, transparency, and credibility.

12. Technological innovations and tools

Continuous changes in communication technologies have significantly altered the practice of journalism, transforming the way news is gathered, produced, and disseminated (**Pavlik**, 2013). The intersections between technology and journalism are negotiated by actors engineering technological innovations and implementing them in the newsroom (**Slaček-Brlek**; **Smrke**; **Vobič**, 2017). Media companies often fail to successfully adopt emergent technology-driven media innovations due to organizational barriers (**Zabel**; **Telkmann**, 2020). Journalists and technical experts work more closely with one another through open-source engagement, which fosters such values as transparency, tinkering, iteration, and participation (**Lewis**; **Usher**, 2013).

Technologies have facilitated the implementation of innovative products, services and processes that meet users' needs (**Storsul**; **Krumsvik**, 2013). **Koivula**, **Villi** and **Sivunen** (2020) investigated how communication technology in creative work and innovation in journalistic teams plays a multi-dimensional role which is full of tensions. In the face of the complex challenges in a post Covid-19 world, there is a growing need for fact-checking (**Graves**; **Nyhan**; **Reifler**, 2016) and news investigation based on artificial intelligence that enhances journalists' abilities in investigative reporting (**Broussard**, 2015).

The concept of computational journalism refers to systems that automate part of the content creation, production, and personalization of journalistic processes (**Vállez**; **Codina**, 2018). It is closely related to the concepts of 'algorithm journalism' (**Lindén**, 2017), 'robot journalism', and 'automated journalism' (**Carlson**, 2015), which simplify the work of humans by concentrating on mechanical tasks and processing large amounts of data (**Gynnild**, 2014a). News organizations are increasingly seeking to make sense of and derive value from Big Data by combining the use of algorithms, computation, and the quantification of massive volumes of data (**Van-Dalen**, 2012). As **Lewis** and **Westlund** (2015, p. 449) argue,

> Covid-19 warns of the need to diversify sources of income and seek alternative financing models

> "Big data embodies emerging ideas about, activities for, and norms connected with data sets, algorithms, computational methods, and related processes and perspectives tied to quantification as a key paradigm of information work."

Other tasks for automated journalism include web and search engine optimization, online analytics, and content curation (**Vállez**; **Codina**, 2018). Algorithms can increase efficiency and job satisfaction with the automation of monotonous and routine tasks, as well as new forms of work 'yet-to-be-invented' that require computational thinking (**Lindén**, 2017, p. 61).

The emergence of drone journalism might exemplify a disruptive innovation in existing concepts of visual journalism that contributes to the creation of new genres, markets, and value networks (**Belair-Gagnon**; **Owen**; **Holton**, 2017; **Gynnild**, 2014b; **Prudkin**; **Mielniczuk**, 2019). Tools such as chatbots or conversational applications, based on artificial intelligence and instant messaging systems, can send filtered and personalized information to users (**Belair-Gagnon**; **Lewis**; **Agur**, 2020; **Sánchez-Gonzales**; **Sánchez-González**, 2017). Sketching is a technique that also develops business skills and fosters creative thinking about how journalism might evolve in light of emerging technologies (**Doherty**; **Worthy**, 2020). Media innovations related to the discipline of voice-user interface design and human–computer interaction enable users to interact through spoken commands and access to news content (**Humphry**; **Chesher**, 2020).

The changes associated with the implementation of digital technologies and tools have not only impacted on news products but also have organizational and institutional implications both for producers and users (**Boczkowski**, 2004; **Küng**, 2015). On the one hand, technology facilitates communication, creativity, and innovation in dispersed teams; on the other, it also leads to uncertainty in creative work (**Koivula**; **Villi**; **Sivunen**, 2020). Technologies such as algorithms, chatbots and automation bring about tangible newness and their novelty naturally generates excitement. However, technological advances in themselves are not innovations. Meaningful innovation in journalism must create news products that are genuinely useful to journalists, organizations, and users, providing them added value.

13. Innovations in audience participation

Although the integration of audience participation into the media innovation discourse has been limited, it has displaced the traditional communication paradigm in which the boundaries between senders and recipients were fixed, as individuals are perceived as subjects of the conversation and not just as passive receivers (**Peña-Fernández** *et al.* 2019). Participatory technologies have transformed the way in which citizens interact with the media, institutions, commerce, and culture. The spread of mobile devices and software make it easier for audiences to archive, comment on and rewrite media content, as well as distribute it. Web 2.0 tools have allowed individuals to easily create and disseminate contents that compete with media-produced news (**Yeo**, 2016). The participatory culture has been driven by the proliferation of social media platforms, which have become a field of experimentation and innovation for news organizations (**Wu**, 2019). Users are able to comment on and give feedback about the news (**Zamith**; **Lewis**, 2014) and are increasingly involved in innovative practices and processes, such as the creation of citizen-generated news photo agencies (**Nicey**, 2013), collaborative photojournalism (**Gorin**, 2015), or communicative interactions through *Google Glass* (**Mills**; **Pellanda**; **Pase**, 2017).

Heikka and **Carayannis** (2019) argue that a narrow understanding of the process of co-creation has limited both the practice and analysis of collaboration between audiences and professional journalists. Innovation in the public sphere can increase through the collaborative steps of co-initiating, co-sensing, and co-creating news (**Heikka**; **Carayannis**, 2019). Furthermore, both authors suggest that professional journalists should participate in the co-creation of journalism initiated by the civil society, challenging the conventional model of newsroom-led participatory journalism.

Many broadcasters, in response to the challenges of digitalization, transformation and adaptation to the new communication ecology, are innovating in strategies of audience participation (**García-Perdomo**, 2020). However, in the case of European public broadcasters, the management of their users' communities is still incipient, not very proactive, and highly conditioned by the demands of their parent public organizations (**López-Golán**; **Rodríguez-Castro**; **Campos-Freire**, 2019; **Virta**; **Lowe**, 2016). Nevertheless, **Martínez-Fernández** *et al.* (2018) found that some Eu-

> Meaningful innovation in journalism must create news products that are genuinely useful to journalists, organizations, and users, providing them added value

ropean broadcasters exhibited a highly personalized and segmented focus on the different audience sectors, as well as transparency in their policies.

In this regard, **Franquet** and **Villa-Montoya** (2014) emphasize an increase in audience loyalty in cross-participation initiatives implemented by the Spanish public broadcaster *RTVE*. Broadcast news innovation requires a multidisciplinary approach to connect with the needs of the public because audiences change even more than technologies and are the heart of innovation processes (**Ranaivoson**; **Farchy**; **Gansemer**, 2013; **Virta**; **Lowe**, 2016). Indeed, the process of reinventing Public Service Media could be enhanced through repositioning the innovation rationale. In some cases, such as in Flanders, public service broadcasters are receiving less investment in innovation (**Donders** *et al.*, 2012). **Cunningham** (2015) shows the ways in which public service media can provide innovative products and services for viewers and for the media systems in which they operate.

> Both *RTVE Lab* and *El Confidencial.LAB* have implemented innovation strategies in key areas that provide them with a competitive advantage

14. The debate over media labs

Innovation labs are a phenomenon worth noting. According to industry data, more than 30 laboratories operate in news organizations around the world, mostly in Europe and North America (**García-Avilés**, 2018). Prestigious news organizations such as *The Washington Post*, *Le Monde*, the *BBC*, *AJ+* or *The Guardian* have implemented laboratories dedicated to producing innovative products, genres, and technological tools (**López-Hidalgo**; **Ufarte-Ruiz**, 2016). Although these departments do not necessarily in themselves imply the existence of innovation in the company, they do allow experimentation with content, product, technologies, and other elements. According to **Sádaba-Chalezquer** and **Salaverría** (2016, p. 153), a media laboratory's mission is

> "to devise and promote innovations of a technological, editorial and/or commercial nature for the competitive improvement of the news organization."

Salaverría (2015) distinguishes four laboratory models: a) those focused on the development of technologies and apps; b) those oriented at innovation in languages, formats, infographics, and data journalism; c) those promoting business and commercial projects; and d) those devoted to training in journalism.

Media labs seem an ideal setting to try out formulas that could potentially add value and improve existing journalistic models (**López-García**; **Silva-Rodríguez**; **Negreira-Rey**, 2019, p. 157). Experimentation is essential in these laboratories, where professionals work in an adaptive culture which makes it easy to reject options that do not work and focus on the most viable ones (**Carrión**; **Coronel-Salas**, 2019). The innovative culture is also based on continuous learning, trial and error, minimum viable products, and the implementation of agile work methods (**Pozo-Montes***;* **Larrondo-Ureta***, 2020)*. For instance, targeting a mobile-centric generation of social media users and tech-savvy youth, *Al Jazeera*'s media lab for digital storytelling, launched in 2013 as part of its innovation division, seeks to engage audiences on a wide range of social media platforms (**Zayani**, 2020).

In Spain, digital-only *El Confidencial.LAB* is committed to a strategy based on innovation in key areas of journalistic activity, namely product, audiences, technology, organization, and sources of income (**García-Avilés**, 2018; **Vara-Miguel**, 2016). The lab is made up of interdisciplinary and autonomous teams dedicated to developing products, increasing the organization's flexibility, and improving user experience. In addition, a number of European Public Service Media have launched labs devoted to the implementation of products, services, and formats for multiplatform audiences. *BBC News Labs* develops a global innovation strategy through the design and engineering of products that facilitate journalists' work (**Zaragoza-Fuster**; **García-Avilés**, 2020). Projects include speech-to-text software, prototypes for voice recognition and text analysis, chatbots and object-based media. Spain's *RTVE Lab* focuses on designing and producing interactive genres, multimedia narratives and social media content, with an emphasis on experimentation (**Arias-Robles**, 2016; **Zaragoza-Fuster**; **García-Avilés**, 2018). Both *RTVE Lab* and *ElConfidencial.LAB* have implemented a strategy based on innovation in key areas, which gives them a competitive advantage (**García-Avilés**, 2020c).

Innovation labs can also present some serious challenges for media companies. This happens when lab teams focus their attention on making new products without thinking about the business models that underlie those products, or when they become frustrated when scaling up innovative products and are faced with resistance from their parent company (**García-Avilés**; **Arias-Robles**, 2018). Isolation can also become a major obstacle to efficiency and innovation when these labs work in isolation from the main newsroom or when little knowledge transfer occurs (**Valero-Pastor**; **Carvajal-Prieto**, 2019). The risk of media labs becoming 'innovation silos' with few consequences for the rest of the news organization has been pointed out, as they appear to insulate collaborative teams from the culture of the larger newsroom (**Boyle**, 2016).

> The transformation process of public service media could be improved through an innovation strategy

While these in-house innovation units are intended to infuse experimentation and creativity across the newsroom, institutional barriers hinder their success. According to **Boyle** (2016, p. 241),

> "the organizational hierarchy often acts to constrain the innovative work of intrapreneurial units within digital newsrooms. In the executive layer, newsroom management appears rigid, governed by top-down imperatives issued through formalized channels."

As **Boyle** argues, journalistic autonomy and diffusion of innovations involves three fundamental shifts: from standalone media organizations to networks and alliances; from isolated to harmonized laboratories; and from inward-looking institutional preoccupations to harnessing global flows of experiences, resources, and innovations.

15. News start-ups and their impact on the media ecosystem

A growing body of research explores the role of start-ups as new actors in the digital media scenario, which tend to incorporate agile, flexible work processes, open mindedness, and multidisciplinary work teams (**Nee**, 2013; **Van-Weezel**, 2010). In an exploratory study, **McKelvie** and **Wiklund** (2008) show that knowledge acquisition practices of new and young media outlets were the largest explanatory factors for both product and customer innovation. Most studies reflect an optimistic view of the trend, which is perceived as a hopeful response in the face of the decline of traditional journalism and its economic models (**Valero-Pastor**; **González-Alba**, 2018). These authors recognize the transformative power of start-ups, which can help established media to reformulate their hypotheses and adapt to the new market paradigms, thus providing greater flexibility to the entire industry. **Carlson** and **Usher** (2016, p. 2) argue, in their study on the meta-discourse of these companies through their foundational manifestos, that start-ups

A key factor that provides media start-ups a privileged position to innovate is flexibility

> "compete to define how digital news should be, re-establish the limits of journalism and determine strategies to legitimize their contents."

A key factor that provides media start-ups a privileged position to innovate is flexibility. These companies operate with small structures, constantly evolving and lacking rigid boundaries, which allows them to better adapt to an unpredictable market. Flexibility translates, for example, into minimal staff, multidisciplinary teamwork, and the absence of physical newsrooms (**García-Avilés** *et al.*, 2016, p. 221). Start-ups seek to compete in terms of being

> "more innovative and more in tune with the needs of the public than the big news companies and the legacy media" (**Prenger**; **Deuze**, 2017, p. 249).

Sommer (2018) shows that start-ups generate market intelligence in various ways and, in doing so, prioritize their efforts to learning about users, while paying less attention on examining businesses and competitors. Overall, market orientation seems to have a positive influence on news start-ups' survival and support innovation (**Sommer**, 2018, p. 46). Many start-ups try to fit into a niche and not compete with legacy media, and search for alternative financing sources (**Crespo** *et al*., 2020; **Slot**, 2018). Digital news start-ups with solid foundations, clear objectives, and well-designed strategies have an excellent chance of carving out a niche in the current marketplace.

News entrepreneurism is considered a potential force to revitalize digital journalism (**Carlson**; **Usher**, 2016) and to increase innovative practices in media companies (**Nee**, 2013). News entrepreneurs are regarded as 'agents of innovation' (**Carlson**; **Usher**, 2016, p. 563), challenging the traditional concepts of journalism and retaining the underlying principles of the profession (**Usher**, 2017). Digital-only news outlets are perceived as laboratories for innovation and as trendsetters, and even their failures can provide useful lessons for the media industry (**Buschow**, 2020). Entrepreneurial news ventures have driven innovation by organizing themselves as cooperatives, developing successful reader membership schemes and promoting synergies that underline the added value of collaboration (**Powers**; **Vera-Zambrano**, 2016; **Siapera**; **Papadopoulou**, 2016). **Harlow** and **Chadha**'s (2019) study on digital news startups in India suggests that social identity is tied to understandings of innovation, financing, experimentation, audience interaction, and mission. Thus, entrepreneurial journalism is contributing to the development of models for news production, distribution and commercialization (**Mendiguren-Galdospin**; **Agirreazkuenaga-Onaindia**; **Meso-Ayerdi**, 2019; **Zhang**, 2019).

The interaction at the intersection of legacy news organizations and start-up digital media companies has created new opportunities for innovation. Venture capital funding as a resource promotes innovation from outside the media ecosystem (**Kosterich**; **Weber**, 2018; **Usher**, 2017). News start-ups aim to solve what they regard as journalistic problems in novel ways, yet their concerns mirror larger historical critiques of the profession and the industry (**Prenger**; **Deuze**, 2017). However, the tensions between commercial media and publicly financed news outlets are regarded as obstacles to an open approach to innovation (**Slot**, 2018). Their distinct technological and cultural innovations –the creation of news personalization tools, the development of scalable technology, and the elevation of technological innovation and technologists as equal to journalists–

> Researchers interested in media transformation processes should explore which research objects can be labelled as 'innovations' and holistically integrate different perspectives and methodologies

"do prompt consideration about how the underlying habitus of journalists may well be challenged" (**Usher**, 2017, p. 1116).

16. Conclusion and suggestions for further research

Research on journalism innovation has grown considerably over the last two decades, especially in the areas of management, diffusion, organizational culture, technology, and business models. However, researchers could broaden their interests to deal with issues related to professional culture, as technological tools, economic conditions, and organizational structures continue to transform journalism; interdisciplinary project management, team coordination, and knowledge transfer; leadership and effectiveness; sources of influence, innovation, and creativity; organizational decision-making processes and constraints; innovative professional practices and their influence on journalistic standards and values. These subjects provide a fertile landscape for researchers in journalism innovation to explore.

There is a need for further research to gain deeper insight into the nature, conceptualization, and effects of journalistic innovation. Researchers interested in media transformation processes should explore which research objects can be labelled as 'innovations' and holistically integrate different perspectives and methodologies. Research regarding innovations' social implications and their consequences in organizations is growing but still an immature field. By pursuing integrative perspectives, academics can strive for new theoretical thinking that expands diffusion theory to consider the challenges associated with big data and artificial intelligence, disruptive players such as technological companies, as well as the changing policy environment.

Methodological proposals for future research are also encouraged. It is necessary to expand the traditional methods of case studies and interviews. Longitudinal investigations should be carried out over periods of time, beyond the analysis of the situation at a specific moment, considering the broader factors that influence the development of journalistic innovation at the macro, mezzo, and micro levels. Furthermore, there is a need for comparative studies of an international nature that shed light on innovation in diverse contexts and markets. A key challenge is to move beyond the models of the past and to address the implications of Diffusion of Innovation theory, as news organizations that operate in open media ecosystems are able to grow, absorb new entities, adapt, react, and transform themselves.

The Covid-19 pandemic is speeding up the process of media transformation. The model of journalism financed mainly through advertising is coming to an end and news organizations have a pressing need to diversify their sources of income. The Covid-19 crisis has exposed people's media-related practices and helped to understand the reasons why they engage with the news with a public service journalism focus, providing an opportunity for innovation (**Hess**; **Waller**, 2020b). A key issue is not how newsrooms can innovate in the interests of their own viability but rather how they can build relevance in the interests of the public that they serve. However, innovation can only provide a partial answer to the current challenges news organizations are currently facing.

> Longitudinal investigations should be carried out over periods of time, beyond the analysis of the situation at a specific moment

17. References

Adornato, Anthony C. (2014). "A digital juggling act: New media's impact on the responsibilities of local television reporters". *Electronic news*, v. 8, n. 1, pp. 3-29.
https://doi.org/10.1177/1931243114523963

Aitamurto, Tanja; **Lewis, Seth C.** (2013). "Open innovation in digital journalism: Examining the impact of open APIs at four news organizations". *New media & society*, v. 15, n. 2, pp. 314-331.
https://doi.org/10.1177/1461444812450682

Appelgren, Ester; **Nygren, Gunnar** (2014). "Data journalism in Sweden: Introducing new methods and genres of journalism into 'old' organizations". *Digital journalism*, v. 2, n. 3, pp. 394-405.
https://doi.org/10.1080/21670811.2014.884344

Appelgren, Esther; **Nygren, Gunnar** (2019). "HiPPOs (highest paid person's opinion) in the Swedish media industry on innovation: A study of news media leaders' attitudes towards innovation". *The journal of media innovations*, v. 5, n. 1, pp. 45-60.
https://doi.org/10.5617/jomi.6503

Arias-Robles, Félix (2016). "RTVE y RTVE Lab: incubadora de innovación". In: Sádaba-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-Pilar (coords.). *Innovación y desarrollo de los cibermedios en España*. Eunsa: Pamplona, pp. 20-25. ISBN: 978 84 31331252

Arias-Robles, Félix; **García-Avilés, José-Alberto** (2017). "Many short links: The influence of the quantity and size of links on user behaviour, perception and comprehension". *Digital journalism*, v. 5, n. 9, pp. 1205-1225.
https://doi.org/10.1080/21670811.2016.1240014

Arias-Robles, Félix; **López-López, Pilar-José** (2020). "Driving the closest information. Local data journalism in the UK". *Journalism practice*, online first.
https://doi.org/10.1080/17512786.2020.1749109

Arrese, Ángel (2016). "From gratis to paywalls: A brief history of a retro-innovation in the press's business". *Journalism studies*, v. 17, n. 8, pp. 1051-1067.
https://doi.org/10.1080/1461670X.2015.1027788

Ashuri, Tamar (2013). "Envisioning the Internet: Implementing 'disruptive innovation' in media organizations". *First Monday*, v. 18, n. 5.
https://firstmonday.org/ojs/index.php/fm/article/download/4216/3668

Atkin, David J.; **Hunt, Daniel S.**; **Lin, Carolyn A.** (2015). "Diffusion theory in the new media environment: Toward an integrated technology adoption model". *Mass communication and society*, v. 18, n. 5, pp. 623-650.
https://doi.org/10.1080/15205436.2015.1066014

Badillo, Patrick-Yves; **Bourgeois, Dominique** (2020). "Innovation and media: googlization and limited creativity". In: Kiriya, Ilya; Kompatsiaris, Panos; Mylonas, Yannis (eds.). *The industrialization of creativity and its limits. Values, politics and lifestyles of contemporary cultural economies*, pp. 189-204. ISBN: 978 3 030531638

Bakker, Piet (2013). "Measuring innovation. Successes and failures in a newspaper market". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 161-174. ISBN: 978 91 86523657

Barland, Jens (2013). "Innovation of new revenue streams in digital media. Journalism as customer relationship". *Nordicom review*, n. 34, pp. 99-112.
https://www.nordicom.gu.se/en/node/34528

Barnhurst, Kevin G. (2012). "'Trust me, I'm an innovative journalist,' and other fictions". In: Broersma, Marcel; Peters, Chris (eds.). *Rethinking journalism: trust and participation in a transforming media landscape*. London: Routledge, pp. 210-220. ISBN: 978 0 415 69701 9

Baumann, Sabine (2013). "Adapting to the brave new world. Innovative organisational strategies for media companies". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 77-92. ISBN: 978 91 86523657

Bechmann, Anja; **Bilgrav-Nielsen, Kristine**; **Korsgaard-Jensen, Anne-Louise** (2016). "Data as a revenue model: Sharewall as a payment method and editorial algorithm in the news industry". *Nordicom information*, v. 38, n. 1, pp. 76-82.
https://www.nordicom.gu.se/en/node/37011

Belair-Gagnon, Valerie; **Holton, Avery E.** (2019). "The two faces of Janus: Web analytics companies and the shifting culture of news". *Journalism practice*, v. 13, n. 8, pp. 993-997.
https://doi.org/10.1080/17512786.2019.1642132

Belair-Gagnon, Valerie; **Lewis, Seth C.**; **Agur, Colin** (2020). "Failure to launch: competing institutional logics, intrapreneurship, and the case of chatbots". *Journal of computer-mediated communication*, v. 25, n. 4, pp. 291-306.
https://doi.org/10.1093/jcmc/zmaa008

Belair-Gagnon, Valerie; **Owen, Taylor**; **Holton, Avery E.** (2017). "Unmanned aerial vehicles and journalistic disruption: Perspectives of early professional adopters". *Digital journalism*, v. 5, n. 10, pp. 1226-1239.
https://doi.org/10.1080/21670811.2017.1279019

Belair-Gagnon, Valerie; **Steinke, Allison J.** (2020). "Capturing digital news innovation research in organizations, 1990-2018". *Journalism studies*, v. 21, n. 12, pp. 1724-1743.
https://doi.org/10.1080/1461670X.2020.1789496

Benítez-de-Gracia, María-José; **Herrera-Damas, Susana** (2018). "El reportaje inmersivo en vídeo 360º: diseño de un modelo de análisis". *El profesional de la información*, v. 27, n. 1, pp. 149-161.
https://doi.org/10.3145/epi.2018.ene.14

Bleyen, Válery-Anne; **Lindmark, Sven**; **Ranaivoson, Heritiana**; **Ballon, Pieter** (2014). "A typology of media innovations: Insights from an exploratory study". *The journal of media innovations*, v. 1, n. 1, pp. 28-51.
https://doi.org/10.5617/jmi.v1i1.800

Boczkowski, Pablo J. (2004). *Digitizing the news: Innovation in online newspapers*. Cambridge, MA: MIT Press. ISBN: 0262025590

Boczkowski, Pablo J. (2004). "The mutual shaping of technology and society in videotex newspapers: Beyond the diffusion and social shaping perspectives". *The information society*, v. 20, n. 4, pp. 255-267.
https://doi.org/10.1080/01972240490480947

Boczkowski, Pablo J.; **Ferris, José-Antonio** (2005). "Multiple media, convergent processes, and divergent products: Organizational innovation in digital media production at a European firm". *The annals of the American Academy of Political and Social Science*, v. 597, n. 1, pp. 32-47.
https://doi.org/10.1177/0002716204270067

Boyles, Jan-Lauren (2016). "The isolation of innovation: Restructuring the digital newsroom through intrapreneurship". *Digital journalism*, v. 4, n. 2, pp. 229-246.
https://doi.org/10.1080/21670811.2015.1022193

Boyles, Jan-Lauren (2020). "Laboratories for news? Experimenting with journalism hackathons". *Journalism*, v. 21, n. 9, pp. 1338-1354.
https://doi.org/10.1177/1464884917737213

Broersma, Marcel; **Singer, Jane B.** (2020). "Caught between innovation and tradition: young journalists as normative change agents in the journalistic field". *Journalism practice*, online first.
https://doi.org/10.1080/17512786.2020.1824125

Brookes, Stephanie (2018). "'Join us for all the developments': *Guardian Australia* and the construction of journalistic identity in press gallery reporting". *Media international Australia*, v. 167, n. 1, pp. 105-120.
https://doi.org/10.1177/1329878X18766079

Broussard, Meredith (2015). "Artificial intelligence for investigative reporting: Using an expert system to enhance journalists' ability to discover original public affairs stories". *Digital journalism*, v. 3, n. 6, pp. 814-831.
https://doi.org/10.1080/21670811.2014.985497

Bruns, Axel (2014). "Media innovations, user innovations, societal innovations". *The journal of media innovations*, v. 1, n. 1, pp. 13-27.
https://doi.org/10.5617/jmi.v1i1.827

Buschow, Christopher (2020). "Why do digital native news media fail? An investigation of failure in the early start-up phase". *Media and communication*, v. 8, n. 2, pp. 51-61.
https://doi.org/10.17645/mac.v8i2.2677

Capoano, Edson (2018). "Innovación en medios independientes digitales: casos en Brasil y España". *Mediatika. Cuadernos de medios de comunicación*, n. 16.
http://ojs.eusko-ikaskuntza.eus/index.php/mediatika/article/view/149

Carlson, Matt (2015). "The robotic reporter: Automated journalism and the redefinition of labor, compositional forms, and journalistic authority". *Digital journalism*, v. 3, n. 3, pp. 416-431.
https://doi.org/10.1080/21670811.2014.976412

Carlson, Matt; **Usher, Nikki** (2016). "News startups as agents of innovation. For-profit digital news startup manifestos as metajournalistic discourse". *Digital journalism*, v. 4, n. 5, pp. 563-581.
https://doi.org/10.1080/21670811.2015.1076344

Carvajal-Prieto, Miguel; **Arias-Robles, Félix**; **Negredo, Samuel**; **Amoedo, Avelino** (2015). "Aproximación metodológica al estudio de la innovación en periodismo". *Observatorio (OBS*)*, v. 9, n. 3, pp. 15-31.
http://obs.obercom.pt/index.php/obs/article/view/793

Carvajal-Prieto, Miguel; **García-Avilés, José-Alberto**; **González, José-Luis** (2012). "Crowdfunding and non-profit media: The emergence of new models for public interest journalism". *Journalism practice*, v. 6, n. 5-6, pp. 638-647.
https://doi.org/10.1080/17512786.2012.667267

Casero-Ripollés, Andreu; **Cullell-March, Cristina** (2013). "Periodismo emprendedor. Estrategias para incentivar el autoempleo periodístico como modelo de negocio". *Estudios sobre el mensaje periodístico*, v. 19, pp. 681-690.
https://doi.org/10.5209/rev_ESMP.2013.v19.42151

Cestino, Joaquín; **Berndt, Adele** (2017). "Institutional limits to service dominant logic and servitisation in innovation efforts in newspapers". *Journal of media business studies*, v. 14, n. 3, pp. 188-216.
https://doi.org/10.1080/16522354.2018.1445163

Chadha, Kalyani; **Wells, Rob** (2016). "Journalistic responses to technological innovation in newsrooms: An exploratory study of Twitter use". *Digital journalism*, v. 4, n. 8, pp. 1020-1035.
https://doi.org/10.1080/21670811.2015.1123100

Chasi, Colin; **Rodny-Gumede, Ylva** (2020) "Innovation in communication and media studies: reflections from South African academics". *Communicatio*, v. 46, n. 2, pp. 107-125.
https://doi.org/10.1080/02500167.2020.1796728

Chua, Sherwin; **Duffy, Andrew** (2019). "Friend, foe or frenemy? Traditional journalism actors' changing attitudes towards peripheral players and their innovations". *Media and communication*, v. 7, n. 4, pp. 112-122.
https://doi.org/10.17645/mac.v7i4.2275

Colussi, Juliana; **Gomes-Franco-e-Silva, Flávia**; **Melani-Rocha, Paula** (eds.). (2018). *Periodismo ubicuo: convergencia e innovación en las nuevas redacciones*. Bogotá: Editorial Universidad del Rosario. ISBN: 978 958 7840728

Compaine, Ben; **Hoag, Anne** (2012). "Factors supporting and hindering. New entry in media markets: A study of media entrepreneurs". *International journal on media management*, v. 14, n. 1, pp. 27-49.
https://doi.org/10.1080/14241277.2011.627520

Creech, Brian; **Mendelson, Andrew L.** (2015) "Imagining the journalist of the future: technological visions of journalism education and newswork". *The communication review*, v. 18, n. 2, pp. 142-165.
https://doi.org/10.1080/10714421.2015.1031998

Creech, Brian; **Nadler, Anthony M.** (2018). "Post-industrial fog: Reconsidering innovation in visions of journalism's future". *Journalism*, v. 19, n. 2, pp. 182-199.
https://doi.org/10.1177/1464884916689573

Crespo, Miguel; **Pinto-Martinho, Ana**; **Foà, Caterina**; **Paisana, Miguel**; **Pais, Pedro-Caldeira** (2020). "Business models of journalistic startups in Portugal: an analysis of product innovation, dissemination and monetization in media enterprises". *Nordic journal of media management*, v. 1, n. 2, pp. 261-296.
https://doi.org/10.5278/njmm.2597-0445.5194

Cunningham, Stuart (2015). "Repositioning the innovation rationale for public service media". *International journal of digital television*, v. 6, n. 2, pp. 203-220.
https://doi.org/10.1386/jdtv.6.2.203_1

Dal-Zotto, Cinzia; **Van-Kranenburg, Hans** (eds.) (2008). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing. ISBN: 978 1 847201096

De-Lara-González, Alicia; **Arias-Robles, Félix**; **Carvajal-Prieto, Miguel**; **García-Avilés, José-Alberto** (2015). "Ranking de innovación periodística 2014 en España. Selección y análisis de 25 iniciativas". *El profesional de la información*, v. 24, n. 3, pp. 235-245.
https://doi.org/10.3145/epi.2015.may.03

De-Lara-González, Alicia; **Santos-Maestre, Lorena** (2019). "Análisis de las relaciones entre medios de comunicación digitales: ejemplos del panorama español". *Revista internacional de historia de la comunicación*, n. 13, pp. 53-70.
https://doi.org/10.12795/RiHC.2019.i13.04

De-Maeyer, Juliette; **Libert, Manon**; **Domingo, David**; **Heinderyckx, François**; **Le-Cam, Florence** (2015). "Waiting for data journalism: A qualitative assessment of the anecdotal take-up of data journalism in French-speaking Belgium". *Digital journalism*, v. 3, n. 3, pp. 432-446.
https://doi.org/10.1080/21670811.2014.976415

Dogruel, Leyla (2013). "Opening the black box. The conceptualising of media innovation". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 29-44. ISBN: 978 91 86523657

Dogruel, Leyla (2014). "What is so special about media innovations? A characterization of the field". *The journal of media innovations*, v. 1, n. 1, pp. 52-69.
https://doi.org/10.5617/jmi.v1i1.665

Dogruel, Leyla (2015). "Innovation research in media management and economics: An integrative framework". *Journal of media business studies*, v. 12, n. 3, pp. 153-167.
https://doi.org/10.1080/16522354.2015.1069478

Doherty, Skye; **Worthy, Peter** (2020). "Sketching: A method for imagining journalistic tech". *Digital journalism*, online first.
https://doi.org/10.1080/21670811.2020.1764373

Domingo, David (2008). "Interactivity in the daily routines of online newsrooms: Dealing with an uncomfortable myth". *Journal of computer-mediated communication*, v. 13, n. 3, pp. 680-704.
https://doi.org/10.1111/j.1083-6101.2008.00415.x

Donders, Karen; **Ranaivoson, Heritiana**; **Lindmark, Sven**; **Ballon, Pieter** (2012). "Public broadcasters and innovation: A contested combination in Flanders". *Innovation*, v. 14, n. 2, pp. 276-288.
https://doi.org/10.5172/impp.2012.14.2.276

Dowling, David O. (2020). *The gamification of digital journalism: innovation in journalistic storytelling*. London: Routledge. ISBN: 978 0 367076252

Doyle, Gillian (2013). "Re-invention and survival: Newspapers in the era of digital multiplatform delivery". *Journal of media business studies*, v. 10, n. 4, pp. 1-20.
https://doi.org/10.1080/16522354.2013.11073569

Drok, Nico (2013). "Beacons of reliability: European journalism students and professionals on future qualifications for journalists". *Journalism practice*, v. 7, n. 2, pp. 145-162.
https://doi.org/10.1080/17512786.2012.753209

Ekdale, Brian; **Singer, Jane B.**; **Tully, Melissa**; **Harmsen, Shawn** (2015). "Making change: Diffusion of technological, relational, and cultural innovation in the newsroom". *Journalism & mass communication quarterly*, v. 92, n. 4, pp. 938-958.
https://doi.org/10.1177/1077699015596337

Emde, Katharina; **Klimmt, Chistoph**; **Schluetz, Daniela M.** (2016). "Does storytelling help adolescents to process the news? A comparison of narrative news and the inverted pyramid". *Journalism studies*, v. 17, n. 5, pp. 608-627.
https://doi.org/10.1080/1461670X.2015.1006900

Engebretsen, Martin; **Kennedy, Helen**; **Weber, Wibke** (2018). "Data visualization in Scandinavian newsrooms: Emerging trends in journalistic visualization practices". *Nordicom review*, v. 39, n. 2, pp. 3-18.
https://doi.org/10.2478/nor-2018-0007

English, Peter (2016). "Twitter's diffusion in sports journalism: Role models, laggards and followers of the social media innovation". *New media & society*, v. 18, n. 3, pp. 484-501.
https://doi.org/10.1177/1461444814544886

Evans, Sandra K. (2018). "Making sense of innovation: Process, product, and storytelling innovation in public service broadcasting organizations". *Journalism studies*, v. 19, n. 1, pp. 4-24.
https://doi.org/10.1080/1461670X.2016.1154446

Evens, Ton; **Raats, Tim**; **Von-Rimscha, M. Bjørn** (2017). "Business model innovation in news media organisations-2018 special issue of the European Media Management Association". *Journal of media business studies*, v. 14, n. 3, pp. 167-172.
https://doi.org/10.1080/16522354.2018.1445164

Fernández-Quijada, David; **Bonet, Montse**; **Suárez-Candel, Roberto**; **Arboledas, Luis** (2015). "From rhetorics to practice: Implementation of technological innovation within Spanish public service media". *The journal of media innovations*, v. 2, p. 2, pp. 23-39.
https://doi.org/10.5617/jmi.v2i2.845

Ferrucci, Patrick (2018). "We've lost the basics": perceptions of journalism education from veterans in the field". *Journalism & mass communication educator*, v. 73, n. 4, pp. 410-420.
https://doi.org/10.1177/1077695817731870

Foss, Nicolai J.; **Saebi, Tina** (2017). "Fifteen years of research on business model innovation: How far have we come, and where should we go?". *Journal of management*, v. 43, n. 1, pp. 200-227.
https://doi.org/10.1177/0149206316675927

Franquet, Rosa; **Villa-Montoya, María-Isabel** (2014). "Cross-media production in Spain's public broadcaster RTVE: Innovation, promotion, and audience loyalty strategies". *International journal of communication*, v. 8, pp. 2301-2322.
https://ijoc.org/index.php/ijoc/article/viewFile/2621/1203

Gade, Peter J.; **Perry, Earnest L.** (2003). "Changing the newsroom culture: A four-year case study of organizational development at the St. Louis Post-dispatch". *Journalism & mass communication quarterly*, v. 80, n. 2, pp. 327-347.
https://doi.org/10.1177/107769900308000207

Gade, Peter J.; **Shugofa-Dastgeer, Christina**; **Childs-DeWalt, Emmanuel-Lugard-Nduka**; **Seunghyun-Kim, Desiree-Hill**; **Curran, Kevin** (2018). "Management of journalism transparency: Journalists' perceptions of organizational leaders' management of an emerging professional norm". *International journal on media management*, v. 20, n. 3, pp. 157-173.
https://doi.org/10.1080/14241277.2018.1488257

García-Avilés, José-Alberto (2012). "Innovation management in crossmedia production: Leading change in the newsroom". In: Ibrus, Indrek; Scolari, Carlos A. (eds.). *Crossmedia innovations: Texts, markets, institutions*. Frankfurt: Peter Lang, pp. 220-239. ISBN: 978 3 631622285

García-Avilés, José-Alberto (2016). "Lo imposible: Construyendo la ética del periodismo tras el tsunami digital". In: Suárez-Villegas, Juan-Carlos; Cruz-Álvarez, Jesús (eds.). *Desafíos éticos en el periodismo digital*. Madrid: Dykinson, pp. 29-49. ISBN: 978 84 90859780

García-Avilés, José-Alberto (2017). "Identifying innovation. How to grasp the chance of change -some lessons from Spain". In: Kaltenbrunner, Andy; Karmasin, Matthias; Kraus, Daniela (eds.). *Journalism report V: Innovation and transition.* Viena: Facultas, pp. 35-48. ISBN: 978 3 708915784

García-Avilés, José-Alberto (2018). "Resultados de la innovación en los laboratorios de medios: el caso de *El confidencial.LAB*". *El profesional de la información*, v. 27, n. 2, pp. 359-366.
https://doi.org/10.3145/epi.2018.mar.14

García-Avilés, José-Alberto (2020a). "Reinventing television news: Innovative formats in a social media environment". In: Vázquez-Herrero, Jorge; Direito-Rebollal, Sabela; Silva-Rodríguez, Alba; López-García, Xosé (eds.). *Journalistic metamorphosis. Media transformation in the digital age*. Cham, Springer, pp. 143-155. ISBN: 978 3 030363147

García-Avilés, José-Alberto (2020b). "Diffusion of innovation". In: Van-den-Bulck, Jan (ed.). *The international encyclopedia of media psychology*. London: Wiley, pp. 1-8. ISBN: 978 1 119011064

García-Avilés, José-Alberto (2020c). "How news organizations face disruption in a networked environment: exploring the implementation of innovations in media labs". In: Peña-Fernández, Simón; Meso-Ayerdi, Koldobika; Larrondo-Ureta, Ainara (eds.). *Active audiences. Empowering citizens' discourse in the hybrid media system*. Madrid: McGraw Hill, pp. 55-66. ISBN: 978 84 48920059

García-Avilés, José-Alberto; **Arias-Robles, Félix** (2016a). "Evolución de los cibermedios en España: claves de la innovación". In: Sádaba-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-Pilar (Coords.) *Innovación y desarrollo de los cibermedios en España.* Pamplona: Eunsa, pp. 63-71. ISBN: 978 8431331252

García-Avilés, José-Alberto; **Arias-Robles, Félix** (2016b). "Géneros periodísticos en los formatos visuales de Twitter: una propuesta de tipología". *Textual & visual media*, v. 9, pp. 101-132.
http://textualvisualmedia.com/index.php/txtvmedia/article/view/52/42

García-Avilés, José-Alberto; **Arias-Robles, Félix** (2018). "Análisis de innovaciones en el sector audiovisual: los casos de la productora 93Metros y el lab de RTVE". In: Rodríguez-Rodríguez, Jorge M. (coord.). *Retroperiodismo, o el retorno a los principios de la profesión periodística*. Zaragoza: Sociedad Española de Periodística, pp. 195-208. ISBN: 978 84 94494123

García-Avilés, José-Alberto; **Carvajal-Prieto, Miguel**; **Arias-Robles, Félix** (2018). "Implementation of innovation in Spanish digital media: analysis of journalists' perceptions". *Revista latina de comunicación social*, n. 73, pp. 369 -384.
http://www.revistalatinacs.org/073paper/1260/19en.html

García-Avilés, José-Alberto; **Carvajal-Prieto, Miguel**; **Arias-Robles, Félix**; **De-Lara-González, Alicia** (2019). "How journalists innovate in the newsroom. Proposing a model of the diffusion of innovations in media outlets". *The journal of media innovations*, v. 5, n. 1, pp. 1-16.
https://doi.org/10.5617/jomi.v5i1.3968

García-Avilés, José-Alberto; **Carvajal-Prieto, Miguel**; **Comín, María** (eds.) (2016). *Cómo innovar en periodismo. Entrevistas a 27 profesionales*. Murcia: Diego Marín. ISBN: 978 84 16908 39 4

García-Avilés, José-Alberto; **Carvajal-Prieto, Miguel**; **De-Lara-González, Alicia**; **Arias-Robles, Félix** (2018). "Developing an index of media innovation in a national market: The case of Spain". *Journalism studies*, v. 19, n. 1, pp. 25-42.
https://doi.org/10.1080/1461670X.2016.1161496

García-Avilés, José-Alberto; **Martínez-Costa, María-Pilar**; **Sádaba-Chalezquer, Charo** (2016). "Luces y sombras sobre la innovación en los medios españoles". In: Sádaba-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-Pilar (coords.). *Innovación y desarrollo de los cibermedios en España.* Eunsa: Pamplona, pp. 265-270. ISBN: 978 84 31331252

García-Avilés, José-Alberto; **Meier, Klaus**; **Kaltenbrunner, Andy** (2017) "Converged media content: reshaping the 'legacy' of legacy media in the online scenario". In: Franklin, Bob; Eldridge, Scott A. II (eds.). *The Routledge companion to digital journalism studies*. London: Routledge, pp. 449-458. ISBN: 978 1 138887961

García-Ortega, Alba; **García-Avilés, José-Alberto** (2018). "Los newsgames como estrategia narrativa en el periodismo transmedia: propuesta de un modelo de análisis". *Revista mediterránea de comunicación*, v. 9, n. 1, pp. 327-346.
https://www.doi.org/10.14198/MEDCOM2018.9.1.19

García-Perdomo, Víctor (2020). "Re-digitizing television news: The relationship between TV, online media and audiences". *Digital journalism*, online first.
https://doi.org/10.1080/21670811.2020.1777179

García-Perdomo, Víctor; **Magaña, María-Isabel** (2020). "The adoption of technology and innovation among native online news media in Colombia". *International journal of communication*, v. 14, pp. 3076-3095.
https://ijoc.org/index.php/ijoc/article/view/12124

García-Santamaría, José-Vicente; **Clemente-Fernández, María-Dolores**; **López-Aboal, María** (2013). "La organización de las redacciones en los nuevos diarios digitales españoles y su relación con los nuevos modelos de negocio". *Textual and visual media*, n. 6, pp. 141-160.
http://textualvisualmedia.com/index.php/txtvmedia/article/view/81

Garrison, Bruce (2001). "Diffusion of online information technologies in newspaper newsrooms". *Journalism*, v. 2, n. 2, pp. 221-239.
https://doi.org/10.1177/146488490100200206

Gershon, Richard A. (2016). *Digital media and innovation: Management and design strategies in communication*. Los Angeles: Sage Publications. ISBN: 978 1 452241418

Gholampour-Rad, Masoud (2017). "Disruptive innovation in media industry ecosystem and need for improving managerial cognitive capabilities in polymediation era". *Cogent business & management*, v. 4, n. 1, pp. 135-183.
https://doi.org/10.1080/23311975.2017.1352183

Gorin, Valérie (2015). "Innovation (s) in Photojournalism: Assessing visual content and the place of citizen photojournalism in Time's Lightbox photoblog". *Digital journalism*, v. 3, n. 4, pp. 533-551.
https://doi.org/10.1080/21670811.2015.1034524

Graves, Lucas; **Nyhan, Brendan**; **Reifler, Jason** (2016). "Understanding innovations in journalistic practice: A field experiment examining motivations for fact-checking". *Journal of communication*, v. 66, n. 1.
https://doi.org/102-138. 10.1111/jcom.12198

Graybeal, Geoffrey-Michael; **Hayes, Jameson-Lee** (2011). "A modified news micropayment model for newspapers on the social web". *International journal on media management*, v. 13, n. 2, pp. 129-148.
https://doi.org/10.1080/14241277.2011.568808

Groves, Jonathan; **Brown, Carrie** (2020). *Transforming newsrooms: connecting organizational culture, strategy, and innovation*. London: Routledge. ISBN: 978 1 138841277

Grubenmann, Stephanie (2016). "Action research: Collaborative research for the improvement of digital journalism practice". *Digital journalism*, v. 4, n. 1, pp. 160-176.
https://doi.org/10.1080/21670811.2015.1093274

Günzel, Franziska; **Holm, Anna B.** (2013). "One size does not fit all - understanding the front-end and back-end of business model innovation". *International journal of innovation management*, v. 17, n. 1, 1340002.
https://doi.org/10.1142/S1363919613400021

Gynnild, Astrid (2014a). "Journalism innovation leads to innovation journalism: The impact of computational exploration on changing mindsets". *Journalism*, v. 15, n. 6, pp. 713-730.
https://doi.org/10.1177/1464884913486393

Gynnild, Astrid (2014b). "The robot eye-witness: Extending visual journalism through drone surveillance". *Digital journalism*, v. 2, n. 3, pp. 334-343.
https://doi.org/10.1080/21670811.2014.883184

Habann, Frank (2008). "Towards a methodological foundation of media innovation research". In: Dal-Zotto, Cinzia; Van-Kranenburg, Hans (eds.). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing, pp. 67-96. ISBN: 978 1 847201096

Harlow, Summer (2018). "Quality, innovation, and financial sustainability: Central American entrepreneurial journalism through the lens of its audience". *Journalism practice*, v. 12, n. 5, pp. 543-564.
https://doi.org/10.1080/17512786.2017.1330663

Harlow, Summer; **Chadha, Monica** (2018). "Looking for community in community news: An examination of public-spirited content in online local news sites". *Journalism*, online first.
https://doi.org/10.1177/1464884918805255

Harlow, Summer; **Chadha, Monica** (2019). "Indian entrepreneurial journalism: Building a typology of how founders' social identity shapes innovation and sustainability". *Journalism studies*, v. 20, n. 6, pp. 891-910.
https://doi.org/10.1080/1461670X.2018.1463170

Harlow, Summer; **Salaverría, Ramón** (2016). "Regenerating journalism: Exploring the 'alternativeness' and 'digital-ness' of online-native media in Latin America". *Digital journalism*, v. 4, n. 8, pp. 1001-1019.
https://doi.org/10.1080/21670811.2015.1135752

Heckman, Meg; **Wihbey, John** (2019). "The local-mobile paradox: Missed innovation opportunities at local newspapers". *Newspaper research journal*, v. 40, n. 3, pp. 317-328.
https://doi.org/10.1177/0739532919835610

Heikka, Taneli; **Carayannis, Elias G.** (2019). “Three stages of innovation in participatory journalism - co-initiating, co-sensing, and co-creating news in the Chicago School cuts case”. *Journal of the knowledge economy*, v. 10, n. 2, pp. 437-464.
https://doi.org/0.1007/s13132-017-0466-0

Hendrickx, Jonathan; **Donders, Karen**; **Picone, Ike** (2020). “Innovating journalism by going back in time? The curious case of newsletters as a news source in Belgium”. In: Vázquez-Herrero, Jorge; Direito-Rebollal, Sabela; Silva-Rodríguez, Alba; López-García, Xosé (eds.). *Journalistic metamorphosis. Media transformation in the digital age*. Cham, Springer, pp. 57-68. ISNB: 978 3 03 036314 7

Hendrickx, Jonathan; **Picone, Ike** (2020). “Innovation beyond the buzzwords: The rocky road towards a digital first-based newsroom”. *Journalism studies*, v. 21, n. 14, pp. 2025-2041.
https://doi.org/10.1080/1461670X.2020.1809494

Hepp, Andreas; **Loosen, Wiebke** (2019). “Pioneer journalism: Conceptualizing the role of pioneer journalists and pioneer communities in the organizational re-figuration of journalism”. *Journalism*, online first.
https://doi.org/10.1177/1464884919829277

Hess, Kristy; **Waller, Lisa-Jane** (2020a). “Charting the media innovations landscape for regional and rural newspapers”. *Australian journalism review*, v. 42, n. 1, pp. 59-75.
https://doi.org/10.1386/ajr_00019_1

Hess, Kristy; **Waller, Lisa-Jane** (2020b). “Local newspapers and coronavirus: conceptualising connections, comparisons and cures”. *Media international Australia*, online first.
https://doi.org/10.1177/1329878X20956455

Hewett, Jonathan (2016). “Learning to teach data journalism: Innovation, influence and constraints”. *Journalism*, v. 17, n. 1, pp. 119-137.
https://doi.org/10.1177/1464884915612681

Holm, Anna B.; **Günzel, Franziska**; **Ulhøi, John P.** (2013). “Openness in innovation and business models: Lessons from the newspaper industry”. *International journal of technology management*, v. 61, n. 3-4, pp. 324-348.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2243493

Holton, Avery E.; **Belair-Gagnon, Valerie** (2018). “Strangers to the game: interloper, intraloper and shifting news production”. *Media and communication*, v. 6, n. 4, pp. 70-78.
https://doi.org/10.17645/mac.v6i4.1490

Humphry, Justine; **Chesher, Chris** (2020). “Preparing for smart voice assistants: Cultural histories and media innovations”. *New media & society*, online first.
https://doi.org/10.1177/1461444820923679

Imre, Iveta; **Wenger, Debora** (2020). “Where newsroom leaders see technology facilitating innovation in local TV news”. *Electronic news*, online first.
https://doi.org/10.1177/1931243120963705

Järventie-Thesleff, Rita; **Moisander, Johana**; **Villi, Mikko** (2014). “The strategic challenge of continuous change in multi-platform media organizations - A strategy-as-practice perspective”. *International journal on media management*, v. 16, n. 3-4, pp. 123-138.
https://doi.org/10.1080/14241277.2014.919920

Kalogeropoulos, Antonis; **Nielsen, Rasmus-Kleis** (2018). “Investing in online video news: A cross-national analysis of news organizations’ enterprising approach to digital media”. *Journalism studies*, v. 19, n. 15, pp. 2207-2224.
https://doi.org/10.1080/1461670X.2017.1331709

Kaltenbrunner, Andy; **Karmasin, Matthias**; **Kraus, Daniela** (eds.) (2017). *Journalism-report V: innovation and transition*. Vienna: Facultas. ISBN: 978 3 7089 1578 4

Kannengießer, Sigrid (2020). “Fair media technologies: innovative media devices for social change and the good life”. *The journal of media innovations*, v. 6, n. 1, pp. 38-49.
https://doi.org/10.5617/jomi.7832

Khajeheian, Datis; **Tadayoni, Reza** (2016). “User innovation in public service broadcasts: creating public value by media entrepreneurship”. *International journal of technology transfer and commercialisation*, v. 14, n. 2, pp. 117-131.
https://doi.org/10.1504/IJTTC.2016.081635

Klaß, Nina (2020). “Open innovation in media innovation research - a systematic literature review”. *Journal of media business studies*, v. 17, n. 2, pp. 190-218.
https://doi.org/10.1080/16522354.2020.1724498

Koivula, Minna; **Villi, Mikko**; **Sivunen, Anu** (2020). "Creativity and innovation in technology-mediated journalistic work: mapping out enablers and constraints". *Digital journalism*, online first.
https://doi.org/10.1080/21670811.2020.1788962

Koliska, Michael; **Chadha, Kalyani** (2018). "Transparency in German newsrooms: Diffusion of a new journalistic norm?". *Journalism studies*, v. 19, n. 16, pp. 2400-2416.
https://doi.org/10.1080/1461670X.2017.1349549

Konow-Lund, Maria (2020). "Reconstructing investigative journalism at emerging organisations". *The journal of media innovations*, v. 6, n. 1, pp. 9-22.
https://doi.org/10.5617/jomi.7830

Konow-Lund, Maria; **Hågvar, Yngve-Benestad**; **Olsson, Eva-Karin** (2019). "Digital innovation during terror and crises". *Digital journalism*, v. 7, n. 7, pp. 952-971.
https://doi.org/10.1080/21670811.2018.1493937

Kosterich, Allie (2019). "Managing news nerds: strategizing about institutional change in the news industry". *Journal of media business studies*, v. 17, n. 1, pp. 51-68.
https://doi.org/10.1080/16522354.2019.1639890

Kosterich, Allie; **Weber, Matthew S.** (2018). "Starting up the *n*ews: The *impact of ven*ture *capital on the digital news media ecosys*tem". *International journal on media management*, v. 20, n. 4, pp. 239-262.
https://doi.org/10.1080/14241277.2018.1563547

Kramp, Leif; **Loosen, Wiebke** (2018). "The transformation of journalism: From changing newsroom cultures to a new communicative orientation?". In: Andreas Hepp, Andreas Breiter, Uwe Hasebrink (eds.). *Transforming communications*. London: Palgrave Macmillan, pp. 205-239. ISBN: 978 3 319 65583 3

Krumsvik, Arne H. (2015). "Newspaper ownership and the prioritization of digital competences". *Digital journalism*, v. 3, n. 5, pp. 777-790.
https://doi.org/10.1080/21670811.2014.941234

Krumsvik, Arne H.; **Milan, Stefania**; **Bhroin, Niamh-Ni**; **Storsul, Tanja** (2019). "Making (sense of) media innovations". In: Deuze, Mark; Prenger, Mirjam (eds.). *Making media: production, practices, and professions*. Amsterdam: Amsterdam University Press, pp. 193-206. ISBN: 978 94 62988118

Küng, Lucy (2008). "Innovation and creativity in the media industry: What? where? how?". In: Dal-Zotto, Cinzia; Van-Kranenburg, Hans (eds.). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing, pp. 3-13. ISBN: 978 1 847201096

Küng, Lucy (2011). "Managing strategy and maximizing innovation in media organizations". In: Deuze, Mark (ed.). *Managing media work*. Los Angeles: Sage, pp. 43-56. ISBN: 978 1 412971249

Küng, Lucy (2013). "Innovation, technology and organisational change. Legacy media's big challenges. An introduction". In: Storsul, Tanja; Krumsvik, Arne (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 9-12. ISBN: 978 91 86523657

Küng, Lucy (2015). *Innovators in digital news*. London: Reuters Institute for the Study of Journalism; I. B. Tauris. ISBN: 978 1 78453 416 5

Lajqi, Margarita; **Lischka, Juliane A.** (2020). "Normative principles in newsroom innovation. The case of 360° video adoption by editorial knowledge champions". *The journal of media innovations*, online first.
https://doi.org/10.1177/1464884913511565

Lamot, Kenza; **Paulussen, Steve** (2020). "Six uses of analytics: Digital editors' perceptions of audience analytics in the newsroom". *Journalism practice*, v. 14, n. 3, pp. 358-373.
https://doi.org/10.1080/17512786.2019.1617043

Leenders, Mark A. A. M.; **Farrell, Mark A.**; **Van-der-Wurff, Richard** (2016). "Market or society? Dual orientations and the impact on innovativeness in media organizations". *Journal of strategic marketing*, v. 25, n. 5-6, pp. 439-453.
https://doi.org/10.1080/0965254X.2016.1149209

Lehtisaari, Katja-Ulhøi; **Villi, Mikko**; **Grönlund, Mikko**; **Lindén, Carl-Gustav**; **Mierzejewska, Bozena I.**; **Picard, Robert**; **Roepnack, Axel** (2018). "Comparing innovation and social media strategies in Scandinavian and US newspapers". *Digital journalism*, v. 6, n. 8, pp. 1029-1040.
https://doi.org/10.1080/21670811.2018.1503061

Lewis, Seth C. (2011). "Journalism innovation and participation: An analysis of the Knight News Challenge". *International journal of communication*, v. 5, pp. 1623-1648.
https://ijoc.org/index.php/ijoc/article/view/1140

Lewis, Seth C. (2012). "From journalism to information: The transformation of the Knight Foundation and news innovation". *Mass communication and society*, v. 15, n. 3, pp. 309-334.
https://doi.org/10.1080/15205436.2011.611607

Lewis, Seth C.; **Usher, Nikki** (2013). "Open source and journalism: Toward new frameworks for imagining news innovation". *Media, culture & society*, v. 35, n. 5, pp. 602-619.
https://doi.org/10.1177/0163443713485494

Lewis, Seth C.; **Usher, Nikki** (2014). "Code, collaboration, and the future of journalism: A case study of the hacks/hackers global network". *Digital journalism*, v. 2, n. 3, pp. 383-393.
https://doi.org/10.1080/21670811.2014.895504

Lewis, Seth C.; **Usher, Nikki** (2016). "Trading zones, boundary objects, and the pursuit of news innovation: A case study of journalists and programmers". *Convergence*: *the international journal of research into new media technologies*, v. 22, n. 5, pp. 543-560.
https://doi.org/10.1177/1354856515623865

Lewis, Seth C.; **Westlund, Oscar** (2015). "Big data and journalism: Epistemology, expertise, economics, and ethics". *Digital journalism*, v. 3, n. 3, pp. 447-466.
https://doi.org/10.1080/21670811.2014.895504

Lievrouw, Leah A. (2006) "New media design and development: Diffusion of innovations *v*. social shaping of technology". In: Lievrouw, Leah A.; Livingstone, Sonia (eds.). *Handbook of new media: Social shaping and consequences of ICTs*, 2nd ed. London: Sage, pp. 246-265.
https://doi.org/10.4135/9781446211304

Lindén, Carl-Gustav (2015). "Media innovation in a strange place: Newspaper differentiation on Åland". *The journal of media innovations*, v. 2, n. 2, pp. 40-57.
https://doi.org/10.5617/jmi.v2i2.993

Lindén, Carl-Gustav (2017). "Algorithms for journalism: The future of news work". *The journal of media innovations*, v. 4, n. 1, pp 60-76.
https://doi.org/10.5617/jmi.v4i1.2420

Lindmark, Sven; **Ranaivoson, Heritiana**; **Donders, Karen**; **Ballon, Pieter** (2013). "Innovation in small regions' media sectors. Assessing the impact of policy in Flanders". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 127-144. ISBN: 978 91 86523657

Lischka, Juliane A. (2015). "How structural multi-platform newsroom features and innovative values alter journalistic cross-channel and cross-sectional working procedures". *Journal of media business studies*, v. 12, n. 1, pp. 7-28.
https://doi.org/10.1080/16522354.2015.1027114

López-García, Xosé; **Silva-Rodríguez, Alba**; **Negreira-Rey, María C.** (2019). "Laboratory journalism". In: Túñez-López, Miguel; Martínez-Fernández, Valentín-Alejandro; López-García, Xosé; Rúas-Araújo, Xosé; Campos-Freire, Francisco (eds.). *Communication: Innovation & quality*. Cham, Springer, pp. 147-162. ISBN: 978 3 319918600

López-Golán, Mónica; **Rodríguez-Castro, Marta**; **Campos-Freire, Francisco** (2019). "La innovación de las radiotelevisiones públicas europeas en la comunicación digital y las comunidades de usuarios". *Cuadernos.info*, n. 45, pp. 241-255.
https://doi.org/10.7764/cdi.45.1350

López-Hidalgo, Antonio; **Ufarte-Ruiz, María-José** (2016). "Laboratorios de periodismo en España. Nuevas narrativas y retos de futuro". *Ámbitos*, n. 34, pp. 1-12.
https://revistascientificas.us.es/index.php/Ambitos/article/view/9360

Lowe, Gregory-Ferrell; **Stavitsky, Alan G.** (2016). "Ensuring public service news provision in the era of networked communications". *International communication gazette*, v. 78, n. 4, pp. 311-329.
https://doi.org/10.1177/1748048516632163

Lowrey, Wilson (2011). "Institutionalism, news organizations and innovation". *Journalism studies*, v. 12, n. 1, pp. 64-79.
https://doi.org/10.1080/1461670X.2010.511954

Lowrey, Wilson (2012). "Journalism innovation and the ecology of news production: Institutional tendencies". *Journalism & communication monographs*, v. 14, n. 4, pp. 214-287.
https://doi.org/10.1177/1522637912463207

Lowrey, Wilson; **Sherrill, Lindsey**; **Broussard, Ryan** (2019). "Field and ecology approaches to journalism innovation: The role of ancillary organizations". *Journalism studies*, v. 20, n. 15, pp. 2131-2149.
https://doi.org/10.1080/1461670X.2019.1568904

Lund, Anker B. (2008). "Diffusion of innovation in news organizations: Action research of middle managers in Danish mass media". In: Dal-Zotto, Cinzia; Van-Kranenburg, Hans (eds.). (2008). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing, pp. 199-214. ISBN: 978 1 847201096

Mabrook, Radwa; **Singer, Jane B.** (2019). "Virtual reality, 360 video, and journalism studies: conceptual approaches to immersive technologies". *Journalism studies*, v. 20, n. 14, pp. 2096-2112.
https://doi.org/10.1080/1461670X.2019.1568203

Malmelin, Nando; **Virta, Sari** (2016). "Managing creativity in change: Motivations and constraints of creative work in a media organisation". *Journalism practice*, v. 1, n. 8, pp. 1041-1054.
https://doi.org/10.1080/17512786.2015.1074864

Mancebo-García, Marina (2016). "Innovación en formatos audiovisuales. El uso de herramientas de live streaming en Antena 3 y Univision". *Miguel Hernández communication journal*, n. 7, pp. 325-349.
https://dialnet.unirioja.es/descarga/articulo/5794585.pdf

Manfredi-Sánchez, Juan-Luis (coord.) (2015). *Innovación y periodismo. Emprender en la universidad*. Tenerife: Cuadernos artesanos de comunicación, n. 76.
http://www.revistalatinacs.org/067/cuadernos/2015/cac76.pdf

Manfredi-Sánchez, Juan-Luis; **Rojas-Torrijos, José-Luis**; **Herranz-de-la-Casa, José-María** (2015). "Innovación en el periodismo emprendedor deportivo: modelo de negocio y narrativas". *El profesional de la información*, v. 24, n. 3, pp. 265-273.
https://doi.org/10.3145/epi.2015.may.06

Manfredi-Sánchez, Juan-Luis; **Ufarte-Ruiz, María-José**; **Herranz-de-la-Casa, José-María** (2019). "Journalistic innovation and digital society: An adaptation of journalism studies". *Revista latina de comunicación social*, n. 74, pp. 1633 -1654.
https://doi.org/10.4185/RLCS-2019-1402

Martínez-Fernández, Valentín-Alejandro; **Juanatey-Boga, Óscar**; **Crespo-Pereira, Verónica** (2018). "Acciones de innovación de las radiotelevisiones públicas europeas". In: Pérez-Seijo, Sara; Rodríguez-Castro, Marta; Túñez-López, Miguel (eds.). *Debates sobre valores e indicadores del servicio audiovisual público en Europa.* Cuadernos Artesanos de Comunicación. La Laguna: Latina, pp. 17-31.
http://www.cuadernosartesanos.org/2018/cac142.pdf

McKelvie, Alexander; **Wiklund, Johan** (2008). "Understanding innovation in new and young media firms". In: Dal-Zotto, Cinzia; Van-Kranenburg, Hans (eds.). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing, pp. 15-35. ISBN: 978 1 847201096

Meier, Klaus (2007). "Innovations in Central European newsrooms: Overview and case study". *Journalism practice*, v. 1, n. 1, pp. 4-19.
https://doi.org/10.1080/17512780601078803

Meier, Klaus; **Bracker, Isabel**; **Verhovnik, Melanie** (2017). "Technological innovation and convergent journalism: case study on the transformation process of Bavaria's public broadcasting service". *Revista mediterránea de comunicación*, v. 8, n. 1, pp. 33-44.
https://doi.org/10.14198/MEDCOM2017.8.1

Mendiguren-Galdospin, Teresa; **Agirreazkuenaga-Onaindia, Irati**; **Meso-Ayerdi, Koldo** (2019). "Digital news start-ups in Spain: symbolic and social capital as drivers of success". *Estudios sobre el mensaje periodístico***, v.** 25, n. 1, pp. 393-409.
https://doi.org/10.5209/ESMP.63736

Menduni, Enrico (2007). "Four steps in innovative radio broadcasting: From QuickTime to podcasting". *The radio journal - international studies in broadcast and audio media*, v. 5, n. 1, pp. 9-18.
https://doi.org/10.1386/rajo.5.1.9_1

Meneses-Fernández, María-Dolores; **Martín-Gutiérrez, Jorge** (2013). "Realidad aumentada e innovación tecnológica en prensa. La experiencia de ver y escuchar un periódico impreso". *Estudios sobre el mensaje periodístico*, v. 19, n. 1, pp. 207-222.
https://doi.org/10.5209/rev_ESMP.2013.v19.n1.42517

Micó, Josep-Lluís, Masip, Pere; **Domingo, David** (2013). "To wish impossible things*: Convergence as a process of diffusion of innovations in an actor-network". *International communication gazette*, v. 75, n. 1, pp. 118-137.
https://doi.org/10.1177/1748048512461765

Mierzejewska, Bozena I. (2011). "Media management in theory and practice". In: Deuze, Mark (ed.). *Managing media work.* Thousand Oaks: Sage Publications, pp. 13-30. ISBN: 978 1 412971249

Mills, John; **Pellanda, Eduardo**; **Pase, André** (2017). "New interactions: The relationship between journalists and audiences mediated by Google Glass". *Journalism practice*, v. 11, n. 8, pp. 980-999.
https://doi.org/10.1080/17512786.2016.1224679

Mitchelstein, Maria-Elena; **Boczkowski, Pablo J.** (2009). "Between tradition and change: A review of recent research on online news production". *Journalism*, v. 10, n. 5, pp. 562-586.
https://doi.org/10.1177/1464884909106533

Mitchelstein, Maria-Elena; **Boczkowski, Pablo J.**; **Wagner, Maria-Celeste** (2017). "The boomerang effect: innovation in the blogs of mainstream news sites, 2008-2012". *Media, culture & society*, v. 39, n. 8, pp. 1231-1244.
https://doi.org/10.1177/0163443717690819

Moreira-Flores, Ana M. (2017). "Innovation journalism: a multiple concept". *Brazilian journalism research*, v. 13, n. 2, pp. 156-179.
https://bjr.sbpjor.org.br/bjr/article/view/970

Mütterlein, Joschka; **Kunz, Reinhard E.** (2017). "Innovate alone or with others? Influence of entrepreneurial orientation and alliance orientation on media business model innovation". *Journal of media business studies*, v. 14, n. 3, pp. 173-187.
https://doi.org/10.1080/16522354.2018.1445162

Nee, Rebecca C. (2013). "Creative destruction: An exploratory study of how digitally native news nonprofits are innovating online journalism practices". *International journal on media management*, v. 15, n. 1, pp. 3-22.
https://doi.org/10.1080/14241277.2012.732153

Nel, François P. (2010). "Where else is the money? A study of innovation in online business models at newspapers in Britain's 66 cities". *Journalism practice*, v. 4, n. 3, pp. 360-372.
https://doi.org/10.1080/17512781003642964

Nel, François P.; **Milburn-Curtis, Coral**; **Lehtisaari, Katja** (2020). Successful exploration: Organisational ambidexterity and performance in news media firms. *Nordic journal of media management*, v. 1, n. 1, pp. 45-62.
https://doi.org/10.5278/njmm.2597-0445.3495

Nguyen, An (2008). "Facing 'the fabulous monster'. The traditional media's fear-driven innovation culture in the development of online news". *Journalism studies*, v. 9, n. 1, pp. 91-104.
https://doi.org/10.1080/14616700701768147

Nicey, Jérémie (2013). "Between reactivity and reactivation. User-generated news photo agencies, new practices, and traditional processes". In: Storsul, Tanja; Krumsvik, Aarne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 207-218. ISBN: 978 91 86523657

Nielsen, Rasmus K. (2012). "How newspapers began to blog: Recognizing the role of technologists in old media organizations' development of new media technologies". *Information, communication & society*, n. 15, p. 6, pp. 959-978.
https://doi.org/10.1080/1369118X.2012.694898

Nunes, Ana-Cecilia B.; **Canavilhas, João** (2020). "Journalism innovation and its influences in the future of news: a European perspective around Google DNI Fund initiatives". In: Vázquez-Herrero, Jorge; Direito-Rebollal, Sabela; Silva-Rodríguez, Alba; López-García, Xosé (eds.). *Journalistic metamorphosis. Media transformation in the digital age.* Springer, Cham, pp. 41-56. ISBN: 978 3 030363147

Oelrichs, Inga (2020). "Adoption of innovations in digital sports journalism: The use of Twitter by German sports journalists". *Communication & sport*, online first.
https://doi.org/10.1177/2167479520961786

Ostertag, Stephen F.; **Tuchman, Gaye** (2012). "When innovation meets legacy. Citizen journalists, ink reporters and television news". *Information, communication & society*, v. 15, n. 6, pp. 909-931.
https://doi.org/10.1080/1369118X.2012.676057

Owens, John W.; **Dillman-Carpentier, Francesca** (2004). "Radio station innovation and risk taking: A survey of programmers and general managers". *International journal on media management*, v. 6, n. 3-4, pp. 226-234.
https://doi.org/10.1080/14241277.2004.9669405

Palacios, Marcos; **Barbosa, Suzana**; **Da-Silva, Fernando-Firmino**; **Da-Cunha, Rodrigo** (2016). "Mobile journalism and innovation: A study on content formats of autochthonous news apps for tablets". In: Aguado, Juan-Miguel; Feijóo, Carlos; Martínez, Inmaculada (eds.). *Emerging perspectives on the mobile content evolution.* Hershei: IGI Global, pp. 239-262.
https://doi.org/10.4018/978-1-4666-8838-4.ch013

Palomo, Bella; **Palau-Sampio, Dolors** (2016). "El periodista adaptativo. Consultores y directores de innovación analizan las cualidades del profesional de la comunicación". *El profesional de la información,* v. 25, n. 2, pp. 188-195.
https://doi.org/10.3145/epi.2016.mar.05

Parra-Valcarce, David; **Martínez-Arias, Santiago M.** (2019). “Creación de docuwebs: gestión de nuevos géneros periodísticos online”. *El profesional de la información*, v. 28, n. 4, e280420.
https://doi.org/10.3145/epi.2019.jul.20

Paterson, Chris (ed.). (2019). *Journalism and social media in Africa: studies in innovation and transformation*. London: Routledge. ISBN: *978 0 415745260*

Paucar-Carrión, Katty; **Coronel-Salas, Gabriela** (2019). “Laboratorios: un recurso para la innovación periodística”. *Revista ibérica de sistemas e tecnologias de informação*, n. E20, pp. 477-489.
https://search.proquest.com/openview/6f599e35910da632495362b772d95470/1

Paulussen, Steve (2016). “Innovation in the newsroom”. In: Witschge, Tamara; Anderson, C. W.; Domingo, David; Hermida, Alfred (eds.). *The Sage handbook of digital journalism*. London: Sage, pp. 192-206. ISBN: 978 1 473906532

Paulussen, Steve; **Geens, Davy**; **Vandenbrande, Kristel** (2011). “Fostering a culture of collaboration: organizational challenges of newsroom innovation”. In: Domingo, David; Paterson, Chris (eds.). *Making online news*. *Newsroom ethnographies in the second decade of internet journalism*. New York: Peter Lang, v. 2, pp. 3-14. ISBN: 978 1 433110641

Pavlik, John V. (2013). “A vision for transformative leadership: Rethinking journalism and mass communication education for the twenty-first century”. *Journalism & mass communication educator*, v. 68, n. 3, pp. 211-221.
https://doi.org/10.1177/1077695813499561

Pavlik, John V. (2013). “Innovation and the future of journalism”. *Digital journalism*, v. 1, n. 2, pp. 181-193.
https://doi.org/10.1080/21670811.2012.756666

Peña-Fernández, Simón; **Lazkano-Arrillaga, Iñaki**; **Larrondo-Ureta, Ainara** (2019). “Medios de comunicación e innovación social. El auge de las audiencias activas en el entorno digital”. *Andamios*, v. 16, n. 40.
https://doi.org/10.29092/uacm.v16i40.710

Peñafiel-Sáiz, Carmen (2016). “Reinvención del periodismo en el ecosistema digital y narrativas transmedia”, *adComunica*, n. 12, pp. 163-182.
http://hdl.handle.net/10234/167719

Pérez-Seijo, Sara; **Benítez-de-Gracia, María-José** (2018). “Las narrativas inmersivas como valor de innovación en las radiotelevisiones públicas europeas”. In: Pérez-Seijo, Sara, Rodríguez-Castro, Manuel; Túñez-López, Miguel (eds.). *Debates sobre valores e indicadores del servicio audiovisual público en Europa.* Cuadernos Artesanos de Comunicación. La Laguna (Tenerife): Latina, pp. 111-126.
http://www.cuadernosartesanos.org/2018/cac142.pdf

Pettersen, Lene; **Krumsvik, Arne H.** (2019). “Rocking the boat: Proposing a participatory business model for news”. *The journal of media innovations*, online first.
https://doi.org/10.5617/jomi.6561

Picard, Robert G. (2000). “Audience fragmentation and structural limits on media innovation and diversity”. In: Van-Cuilenburg, Jan; Van-der-Wurff, Richard (eds.). *Media and open societies: cultural, economic and policy foundations for media openness and diversity in East and West*, pp. 180-191. Amsterdam: Spinhuis. ISBN: 978 90 55891795

Plesner, Ursula (2009). “An actor-network perspective on changing work practices: communication technologies as actants in news work”. *Journalism*, v. 10, n. 5, pp. 604-626.
https://doi.org/10.1177/1464884909106535

Plewe, Christoph; **Fürsich, Elfriede** (2020). “Producing newsgames beyond boundaries: Journalists, game developers, and the news business”. *Convergence*: *the international journal of research into new media technologies*, online first.
https://doi.org/10.1177/1354856520918076

Porcu, Ornella (2017). “Exploring innovative learning culture in the newsroom”. *Journalism*, v. 21, n. 10, pp. 1556-1572.
https://doi.org/10.1177/1464884917724596

Porcu, Ornella; **Hermans, Liesbeth**; **Broersma, Marcel** (2020). “Unlocking the newsroom: measuring journalists’ perceptions of innovative learning culture”. *Journalism studies*, v. 21, n. 10, pp. 1420-1438.
https://doi.org/10.1080/1461670X.2020.1758956

Powers, Matthew (2012). “‘In forms that are familiar and yet-to-be invented’: American journalism and the discourse of technologically specific work”. *Journal of communication inquiry*, v. 36, n. 1, pp. 24-43.
https://doi.org/10.1177/0196859911426009

Powers, Matthew; **Vera-Zambrano, Sandra** (2016). “Explaining the formation of online news startups in France and the United States: A field analysis”. *Journal of communication*, v. 66, n. 5, pp. 857-877.
https://doi.org/10.1111/jcom.12253

Pozo-Montes, Yaiza*;* **Larrondo-Ureta, Ainara** *(2020). "*Revisión de los factores de innovación en periodismo: análisis de laboratorios de medios". *ZER*, v. 25, n. 48, pp. 191-210.
https://doi.org/10.1387/zer.21417

Prenger, Mirjam; **Deuze, Mark** (2017). "A history of innovation and entrepreneurialism in journalism". In: Boczkowski, Pablo J.; Anderson, C. W. (eds.). *Remaking the news. Essays on the future of journalism scholarship in the digital age*, pp. 235-250. Cambridge, Massachusetts: MIT Press. ISBN: 978 0 262036092

Prudkin, Gonzalo; **Mielniczuk, Luciana P.** (2019). "El periodismo dron: ¿innovación, disrupción o continuidad? Un estudio teórico retrospectivo sobre la captación de imágenes aéreas en el contexto de una cultura visual". *Contemporânea*, v. 17, n. 1, pp. 70-98.
https://doi.org/10.9771/contemporanea.v17i1.26943

Puijk, Roel (2015). "Slow television: a successful innovation in public service broadcasting". *Nordicom review*, v. 36, n. 1, pp. 95-108.
https://doi.org/10.1515/nor-2015-0008

Raetzsch, Christoph (2015). "Innovation through practice: Journalism as a structure of public communication". *Journalism practice*, v. 9, n. 1, pp. 65-77.
https://doi.org/10.1080/17512786.2014.928466

Ranaivoson, Heritiana; **Farchy, Joëlle**; **Gansemer, Mathilde** (2013). "Differentiated strategies for digital innovation on television: Traditional channels *vs.* new entrants". *Observatorio (OBS*)*, v. 7, n. 4, pp. 23-44.
http://obs.obercom.pt/index.php/obs/article/view/659/638

Ritter-Longhi, Rita; **Flores, Ana-Marta** (2017). "Webjournalist narratives as an element of innovation: cases of Al Jazeera, Folha de S. Paulo, The Guardian, The New York Times and The Washington Post". *Intercom: Revista brasileira de ciências da comunicação*, v. 40, n. 1, pp. 21-40.
https://doi.org/10.1590/1809-5844201712

Røe-Mathisen, Birgit; **Morlandstø, Lisbeth** (2018). "Innovating contextual genres. A strategy to sustain regional democratic relevance?". *Sur le journalisme*, v. 7, n. 2.
http://www.surlejournalisme.com/rev

Rogers, Everett M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press. ISBN: 978 0 743222099

Rojas-Torrijos, José-Luis (2013). "Periodismo deportivo. Hacia la innovación y el emprendimiento en la red". In: Sobrados-León, Maritza (coord.). *Presente y futuro en el periodismo especializado*, pp. 197-247. Madrid: Fragua. ISBN: 978 84 70745553

Rojas-Torrijos, José-Luis (2014). "Sports journalism, dissemination and innovation. A case study of the international news coverage of the 2014 Winter Olympic Games". *Textual & visual media: revista de la sociedad española de periodística*, n. 7, pp. 117-130.

Rojas-Torrijos, José-Luis; **González-Alba, José-Antonio** (2018). "La newsletter como producto periodístico en la búsqueda de nuevos lectores. Estudio de boletines de noticias de El País, El Español y El Independiente". *adComunica*, n. 15, pp. 165-195.
https://www.e-revistes.uji.es/index.php/adcomunica/article/view/4972

Rojas-Torrijos, José-Luis; **Panal-Prior, Antonio** (2017). "El uso de Instagram en los medios de comunicación deportivos. Análisis comparado de Bleacher Report, L'équipe y Marca". *Ámbitos: revista internacional de comunicación*, n. 38, pp. 1-19.
https://revistascientificas.us.es/index.php/Ambitos/article/view/9097

Ryfe, David M. (2009a). "Broader and deeper: A study of newsroom culture in a time of change". *Journalism*, v. 10, n. 2, pp. 197-216.
https://doi.org/10.1177/1464884908100601

Ryfe, David M. (2009b). "Structure, agency, and change in an American newsroom". *Journalism*, v. 10, n. 5, pp. 665-683.
https://doi.org/10.1177/1464884909106538

Sádaba-Chalezquer, Charo; **Salaverría, Ramón** (2016). "La innovación y los cibermedios: los labs". In: Sádaba-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-Pilar (coords.). *Innovación y desarrollo de los cibermedios en España*, pp. 41-47. Eunsa: Pamplona. ISBN: 978 84 31331252

Sádaba-Chalezquer, Charo; **García-Avilés, José-Alberto**; **Martínez-Costa, María-Pilar** (2016). *Innovación y desarrollo de los cibermedios en España*. Eunsa: Pamplona. ISBN: 978 84 31331252

Salaverría, Ramón (2015). "Los 'labs' como fórmula de innovación en los medios". *El profesional de la información*, v. 24, n. 4, pp. 397-404.
https://doi.org/10.3145/epi.2015.jul.06

Salaverría, Ramón; **Sádaba-Chalezquer, Charo**; **Breiner, James**; **Warner, Janine C.** (2019). "A brave new digital journalism in Latin America". In: Túñez-López, Miguel; Martínez-Fernández Valentín-Alejandro; López-García, Xosé; Rúas-Araújo, Xosé; Campos-Freire, Francisco (eds.). *Communication: innovation & quality*, pp. 229-247. Cham, Springer. ISBN: 978 3 319 91860 0

Sánchez-Gonzales, Hada M.; **Sánchez-González, María** (2017). "Los bots como servicio de noticias y de conectividad emocional con las audiencias. El caso de Politibot". *Doxa comunicación*, n. 25, pp. 63-84.
https://recyt.fecyt.es/index.php/doxacom/article/view/61946

Sánchez-Gonzales, Hada M.; **Sánchez-González, María** (2020). "Conversational bots used in political news from the point of view of the user's experience: Politibot". *Communication & society*, v. 33, n. 4, pp. 155-168.
https://doi.org/10.15581/003.33.4.155-168

Santín, Marina; **Álvarez-Monzoncillo, José-María** (2020). "The use of YouTube by the Spanish press: A model to be defined". *El profesional de la información*, v. 29, n. 1, e290116.
https://doi.org/10.3145/epi.2020.ene.16

Santos-Silva, Dora (2020). "Paradigmatic innovation in European cultural journalism: the pursuit of sustainability". *The journal of media innovations*, online first.
https://doi.org/10.5617/jomi.6523

Schmitz-Weiss, Amy; **De-Macedo-Higgins-Joyce, Vanessa**; **Harlow, Summer**; **Calmon-Alves, Rosental** (2018). "Innovation and sustainability: a relationship examined among Latin American entrepreneurial news organizations". *Cuadernos.info*, n. 42, pp. 87-100.
https://doi.org/10.7764/cdi.42.1266

Schmitz-Weiss, Amy; **De-Macedo-Higgins-Joyce, Vanessa**; **Harlow, Summer**; **Calmon-Alves, Rosental** (2020). "Defining journalism innovation in Latin America: exploration into perceptions among educators, students, and journalists". *Journalism & mass communication educator*, v. 75, n. 4, pp. 419-435.
https://doi.org/10.1177/1077695820935327

Schmitz-Weiss, Amy; **Domingo, David** (2010). "Innovation processes in online newsrooms as actor-networks and communities of practice". *New media & society*, v. 12, n. 7, pp. 1156-1171.
https://doi.org/10.1177/1461444809360400

Schmitz-Weiss, Amy; **Wulfemeyer, Tom** (2014). "Newspapers, TV news offer more online innovation". *Newspaper research journal*, v. 35, n. 2, pp. 100-118.
https://doi.org/10.1177/073953291403500208

Schoder, Detlef; **Sick, Stefan**; **Putzke, Johanes**; **Kaplan, Andreas M.** (2006). "Mass customization in the newspaper industry: Consumers' attitudes toward individualized media innovations". *International journal on media management*, v. 8, n. 1, pp. 9-18.
https://doi.org/10.1207/s14241250ijmm0801_3

Schweizer, T. Sophie (2003). "Managing interactions between technological and stylistic innovation in the media industries". *Technology analysis & strategic management*, v. 15, n. 1, pp. 19-41.
https://doi.org/10.1080/0953732032000046033

Sekloča, Peter (2015). "Contradictions of media production and the heterogeneity of products". *Javnost-the public*, v. 22, n. 2, pp. 129-144.
https://doi.org/10.1080/13183222.2015.1045713

Siapera, Eugenia; **Papadopoulou, Lambrini** (2016). "Entrepreneurialism or cooperativism? An exploration of cooperative journalistic enterprises". *Journalism practice*, v. 10, n. 2, pp. 178-195.
https://doi.org/10.1080/17512786.2015.1125760

Singer, Jane B. (2004). "Strange bedfellows? The diffusion of convergence in four news organizations". *Journalism studies*, v. 5, n. 1, pp. 3-18.
https://doi.org/10.1080/1461670032000174701

Singer, Jane B. (2014). "Getting past the future: journalism ethics, innovation, and a call for 'flexible first'". *Comunicação e sociedade*, v. 25, pp. 67-82.
https://doi.org/10.17231/comsoc.25(2014).1860

Singer, Jane B.; **Broersma, Marcel** (2020). "Innovation and entrepreneurship: Journalism students' interpretive repertoires for a changing occupation". *Journalism practice*, v. 14, n. 3, pp. 319-338.
https://doi.org/10.1080/17512786.2019.1602478

Sjøvaag, Helle; **Krumsvik, Arne H.** (2018). "In search of journalism funding: scenarios for future media policy in Norway". *Journalism practice*, v. 12, n. 9, pp. 1201-1219.
https://doi.org/10.1080/17512786.2017.1370972

Slaček-Brlek, Sašo; **Smrke, Jurij**; **Vobič, Igor** (2017). "Engineering technologies for journalism in the digital age: A case study". *Digital journalism*, v. 5, n. 8, pp. 1025-1043.
https://doi.org/10.1080/21670811.2017.1338526

Slot, Mijke (2018). "About introvert incumbents and extravert start-ups: An exploration of the dialectics of collaborative innovation in the Dutch journalism field". *Journalism*, online first.
https://doi.org/10.1177/1464884918794303

Socolow, Michael J. (2010). "A profitable public sphere: the creation of The New York Times Op-ed page". *Journalism & mass communication quarterly*, v. 87, n. 2, pp. 281-296.
https://doi.org/10.1177/107769901008700204

Sommer, Cristoph (2018). "Market orientation of news startups". *The journal of media innovations*, v. 4, n. 2, pp. 35-54.
https://doi.org/10.5617/jomi.v4i2.1507

Spyridou, Lia-Paschalia; **Matsiola, Maria**; **Veglis, Andreas**; **Kalliris, George**; **Dimoulas, Charalambos** (2013). "Journalism in a state of flux: Journalists as agents of technology innovation and emerging news practices". *International communication gazette*, v. 75, n. 1, pp. 76-98.
https://doi.org/10.1177/1748048512461763

Steensen, Steen (2009). "What's stopping them? Towards a grounded theory of innovation in online journalism". *Journalism studies*, v. 10, n. 6, pp. 821-836.
https://doi.org/10.1080/14616700902975087

Steensen, Steen (2011). "Online journalism and the promises of new technology". *Journalism studies*, v. 12, n. 3, pp. 311-327.
https://doi.org/10.1080/1461670X.2010.501151

Steensen, Steen (2013). "Balancing the bias. The need for counter-discursive perspectives in media innovation research". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovations. A multidisciplinary study of change*. Göteborg: Nordicom, pp. 45-60. ISBN: 978 91 086523657

Stonbely, Sarah; **Weber, Matthew S.**; **Satullo, Christopher** (2020). "Innovation in public funding for local journalism: A case study of New Jersey's 2018 Civic Information Bill". *Digital journalism*, v. 8, n. 6, pp. 740-757.
https://doi.org/10.1080/21670811.2020.1749102

Storsul, Tanja; **Krumsvik, Arne H.** (2013). "What is media innovation?". In: Storsul, Tanja; Krumsvik, Arne H. (eds.). *Media innovation: A multidisciplinary study of change.* Gothenburg: Nordicom, pp. 13-26. ISBN: 978 91 86523657

Sylvie, George (2017). "Creating innovative news: The values of future newsroom managers". In: Altmeppen, Klaus-Dieter; Hollifield, C. Ann; Van-Loon, Joost (eds.). *Value-oriented media management: decision making between profit and responsibility*. Cham, Springer, pp. 95-108. ISBN 978 3 319 51008 8

Sylvie, George; **Schmitz-Weiss, Amy** (2012). "Putting the management into innovation & media management studies: A meta-analysis". *International journal on media management*, v. 14, n. 3, pp. 183-206.
https://doi.org/10.1080/14241277.2011.633584

Toural-Bran, Carlos; **Vizoso, Ángel**; **Pérez-Seijo, Sara**; **Rodríguez-Castro, Marta**; **Negreira-Rey, María-Cruz** (eds.) (2020). *Information visualization in the era of innovative journalism*. London: Routledge. ISBN: 978 0 367408763

Trappel, Joseph (2015). "What to study when studying media and communication innovation? Research design for the digital age". *The journal of media innovations*, v. 2, n. 1, pp. 7-22.
https://doi.org/10.5617/jmi.v2i1.879

Trillo-Domínguez, Magdalena; **Alberich-Pascual, Jordi** (2020). "Análisis y tipificación de formatos emergentes en el ciberperiodismo español: de la adaptación multimedia a la disrupción transmedia". *Estudios sobre el mensaje periodístico*, v. 26, n. 1, pp. 652-668.
https://doi.org/10.5209/esmp.67317

Túñez-López, Miguel; **Martínez-Fernández, Valentín-Alejandro**; **López-García, Xosé**; **Rúas-Araújo, Xosé**; **Campos-Freire, Francisco** (eds.) (2019). *Communication: Innovation & quality. studies in systems, decision, and control*. Springer, Cham. ISBN: 978 3 319918600

Usher, Nikki (2017). "Venture-backed news startups and the field of journalism". *Digital journalism*, v. 5, n. 9, pp. 1116-1133.
https://doi.org/10.1080/21670811.2016.1272064

Valanto, Vera; **Kosonen, Miia**; **Ellonen, Hanna-Kaisa** (2012). "Are publishers ready for tomorrow? publishers' capabilities and online innovations". *International journal of innovation management*, v. 16, n. 1, pp. 1-18.
https://doi.org/10.1142/S1363919611003362

Valarezo-Cambizaca, Luis-Mario; **Rodríguez-Hidalgo, Claudia** (2019). "La innovación en el periodismo como antídoto ante las fake news". *Revista ibérica de sistemas e tecnologias de informação*, n. E20, pp. 24-35.
https://search.proquest.com/openview/5a6e4c02ea3ee75912f13fc87c888fc5/1.pdf

Valero-Pastor, José-María (2015). "Tendencias de la innovación mediática en Estados Unidos". *Miguel Hernández communication journal*, n. 6, pp. 161-193.
https://doi.org/10.21134/mhcj.v0i6.84

Valero-Pastor, José-María; **Carvajal-Prieto, Miguel** (2019). "Knowledge transfer for the social era within journalistic organisations. A study of Spanish cases". *Revista latina de comunicación social*, n. 74, pp. 1154-1172.
https://doi.org10.4185/RLCS-2019-1376en

Valero-Pastor, José-María; **Carvajal-Prieto, Miguel**; **García-Avilés, José-Alberto** (2019). "Flujos de trabajo para el periodismo postindustrial: métodos y programas para una comunicación organizacional más ágil y transversal". *El profesional de la información*, v. 28, n. 5, e280514.
https://doi.org/10.3145/epi.2019.sep.14

Valero-Pastor, José-María; **González-Alba, José-Antonio** (2018). "Las startups periodísticas como ejemplos de innovación en el mercado mediático español. Estudio de casos". *Revista latina de comunicación social*, n. 73, pp. 556-582.
https://doi.org/10.4185/RLCS-2018-1269

Vállez, Mari; **Codina, Lluís** (2018). "Periodismo computacional: evolución, casos y herramientas". *El profesional de la información*, v. 27, n. 4, pp. 759-768.
https://doi.org/10.3145/epi.2018.jul.05

Van-Dalen, Arjen (2012). "The algorithms behind the headlines: How machine-written news redefines the core skills of human journalists". *Journalism practice*, v. 6, n. 5-6, pp. 648-658.
https://doi.org/10.1080/17512786.2012.667268

Van-der-Wurff, Richard; **Leenders, Mark** (2008). "Media organizational culture and innovative performance". In: Dal-Zotto, Cinzia; Van-Kranenburg, Hans (eds.). *Management and innovation in the media industry*. Cheltenham: Edward Elgar Publishing, pp. 151-171. ISBN: 978 1 84 7201096

Van-Kerkhoven, Marco; **Bakker, Piet** (2014). "The hyperlocal in practice: Innovation, creativity and diversity". *Digital journalism*, v. 2, n. 3, pp. 296-309.
https://doi.org/10.1080/21670811.2014.900236

Van-Kranenburg, Hands (ed.) (2017). *Innovation policies in the European news media industry*. Cham, Springer International. ISBN: 978 3 319 45204 3

Van-Weezel, Aldo (2010). "Creative destruction: Why not researching entrepreneurial media?" *International journal on media management*, v. 12, n. 1, pp. 47-49.
https://doi.org/10.1080/14241270903558442

Vara-Miguel, Alfonso (2016). "El Confidencial: innovar en contenido como clave del éxito". In: Sádaba-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-Pilar (2016). *Innovación y desarrollo de los cibermedios en España*. Eunsa: Pamplona, pp. 166-177. ISBN: 978 84 31331252.

Vázquez-Herrero, Jorge; **Direito-Rebollal, Sabela**; **Silva-Rodríguez, Alba**; **López-García, Xosé** (eds.) (2020). *Journalistic metamorphosis. Media transformation in the digital age*. Cham: Springer. ISBN: 978 3 03 036314 7

Vázquez-Herrero, Jorge; **Negreira-Rey, María-Cruz**; **López-García, Xosé** (2019). "La innovación multimedia e interactiva en el ciberperiodismo argentino". *Revista de comunicación*, v. 18, n. 1, pp. 191-214.
https://doi.org/10.26441/RC18.1-2019-A10

Vázquez-Herrero, Jorge; **Negreira-Rey, María-Cruz**; **Pereira-Fariña, Xosé** (2017). "Contribuciones del documental interactivo a la renovación de las narrativas periodísticas: realidades y desafíos". *Revista latina de comunicación social*, n. 72, pp. 397-414.
https://doi.org/10.4185/RLCS-2017-1171

Vieira-de-Araújo, Lucas (2019). "Main innovation initiatives in communication in Brazil and their relationship with the ecosystem". *Organicom*, v. 16, n. 31, pp. 83-101.
https://doi.org/10.11606/issn.2238-2593.organicom.2019.159694

Villi, Mikko; **Grönlund, Mikko**; **Linden, Carl-Gustav**; **Lehtisaari, Katja**; **Mierzejewska, Bozena**; **Picard, Robert G.**; **Röpnack, Axel** (2019). "They're a little bit squeezed in the middle": strategic challenges for innovation in US Metropolitan newspaper organisations". *Journal of media business studies*, v. 17, n. 1, pp. 33-50.
https://doi.org/10.1080/16522354.2019.1630099

Villi, Mikko; **Picard, Robert G.** (2018). "Transformation and innovation of media business models". In: Deuze, Mark; Prenger, Mirjam (eds.). *Making media. Production, practices, and professions*. Amsterdam: Amsterdam University Press, pp. 121-131. ISBN: 978 94 62988118

Virta, Sari; **Lowe, Gregory-Ferrell** (2016) "Crossing boundaries for innovation: Content development for PSM at Yle". In: Lowe, Gregory-Ferrel; Yamamoto, Nobuto (eds.). *Crossing borders and boundaries in public service media*. RIPE@2015. Göteborg: Nordicom, pp. 229-246. ISBN: 978 91 87957 21 5

Virta, Sari; **Malmelin, Nando** (2017). "Ambidextrous tensions: Dynamics of creative work in the media innovation process". *The journal of media innovations*, v. 4, n. 1, pp. 44-59.
https://doi.org/10.5617/jmi.v4i1.2410

Von-Nordheim, Gerret; **Boczek, Karin**; **Koppers, Lars** (2018). "Sourcing the sources: An analysis of the use of Twitter and Facebook as a journalistic source over 10 years in The New York Times, The Guardian, and Süddeutsche Zeitung". *Digital journalism*, v. 6, n. 7, pp. 807-828.
https://doi.org/10.1080/21670811.2018.1490658

Wagemans, Andrea; **Witschge, Tamara** (2019). "Examining innovation as process: Action research in journalism studies". *Convergence*: *the international journal of research into new media technologies*, v. 25, n. 2, pp. 209-224.
https://doi.org/10.1177/1354856519834880

West, Joel; **Bogers, Marcel** (2014). "Leveraging external sources of innovation: a review of research on open innovation". *Journal of product innovation management*, v. 31, n. 4, pp. 814-831.
https://doi.org/10.1111/jpim.12125

Westlund, Oscar; **Krumsvik, Arne H.** (2014). "Perceptions of intra-organizational collaboration and media workers' interests in media innovations". *The Journal of media innovations*, v. 1, n. 2, pp. 52-74.
https://doi.org/10.5617/jmi.v1i2.858

Westlund, Oscar; **Krumsvik, Arne H.**; **Lewis, Seth C.** (2021). "Competition, change, and coordination and collaboration: tracing news executives' perceptions about participation in media innovation". *Journalism studies*, v. 22, n. 1.
https://doi.org/10.1080/1461670X.2020.1835526

Westlund, Oscar; **Lewis, Seth C.** (2014). "The agents of media innovation activities: Actors, actants, and audiences". *The journal of media innovations*, v. 1, n. 2, pp. 10-35.
https://doi.org/10.5617/jmi.v1i2.856

Witschge, Tamara; **Deuze, Mark**; **Willemsen, Sofie** (2019). "Creativity in (digital) journalism studies: Broadening our perspective on journalism practice". *Digital journalism*, v. 7, n. 7, pp. 972-979.
https://doi.org/10.1080/21670811.2019.1609373

Wood-Adams, Jennifer (2008). "Innovation management and U.S. weekly newspaper web sites: An examination of newspaper managers and emerging technology". *International journal on media management*, v. 10, n. 2, pp. 64-73.
https://doi.org/10.1080/14241270802000454

Wu, Yanfang (2019). "How age affects journalists' adoption of social media as an innovation: A multi-group SEM analysis". *Journalism practice*, v. 13, n. 5, pp. 537-557.
https://doi.org/10.1080/17512786.2018.1511821

Yeo, Tien-Ee-Dominic (2016). "Communicating legitimacy: How journalists negotiate the emergence of user-generated content in Hong Kong". *Journalism & mass communication quarterly*, v. 93, n. 3, pp. 609-626.
https://doi.org/10.1177/1077699016628823

Zabel, Christian; **Telkmann, Verena** (2020). "The adoption of emerging technology-driven media innovations. A comparative study of the introduction of virtual and augmented reality in the media and manufacturing industries". *Journal of media business studies*, online first.
https://doi.org/10.1080/16522354.2020.1839172

Zamith, Rodrigo; **Lewis, Seth C.** (2014). "From public spaces to public sphere: Rethinking systems for reader comments on online news sites". *Digital journalism*, v. 2, n. 4, pp. 558-574.
https://doi.org/10.1080/21670811.2014.882066

Zaragoza-Fuster, María-Teresa; **García-Avilés, José-Alberto** (2018). "Desarrollo de la innovación periodística en la televisión pública: El caso del RTVE Lab". *Hipertext.net: revista académica sobre documentación digital y comunicación interactiva*, v. 17, n. 4.
https://doi.org/10.31009/hipertext.net.2018.i17.02

Zaragoza-Fuster, María-Teresa; **García-Avilés, José-Alberto** (2020). "The role of innovation labs in advancing the relevance of Public Service Media: the cases of BBC News Labs and RTVE Lab". *Communication & society*, v. 33, n. 1, pp. 45-61.
https://doi.org/10.15581/003.33.1.45-61

Zayani, Mohamed (2020). "Digital journalism, social media platforms, and audience engagement: The case of AJ+". *Digital journalism*, online first.
https://doi.org/10.1080/21670811.2020.1816140

Zhang, Shixin-Ivy (2019). "The business model of journalism start-ups in China". *Digital journalism*, v. 7, n. 5, pp. 614-634.
https://doi.org/10.1080/21670811.2018.1496025

Zhang, Shuling; **Feng, Jieyun** (2019). "A step forward? Exploring the diffusion of data journalism as journalistic innovations in China". *Journalism studies*, v. 20, n. 9, pp. 1281-1300.
https://doi.org/10.1080/1461670X.2018.1513814

Zhou, Yuqiong (2008). "Voluntary adopters versus forced adopters: integrating the diffusion of innovation theory and the technology acceptance model to study intra-organizational adoption". *New media & society*, v. 10, n. 3, pp. 475-496.
https://doi.org/10.1177/1461444807085382

Epistemology of mobile journalism. A review

João Canavilhas

Nota: Este artículo se puede leer en español en:
http://www.profesionaldelainformacion.com/contenidos/2021/ene/canavilhas_es.pdf

How to cite this article:

Canavilhas, João (2021). "Epistemology of mobile journalism. A review". *Profesional de la información*, v. 30, n. 1, e300103.

https://doi.org/10.3145/epi.2021.ene.03

Invited manuscript received on December 10th, 2020

João Canavilhas
https://orcid.org/0000-0002-2394-5264

Universidade da Beira Interior, Departamento de Comunicação, Filosofia e Política I
LabCom - Comunicação e Artes
Av. Marquês d'Avila e Bolama
6200-001 Covilhã, Portugal
jc@ubi.pt

Abstract

The fast and global way which has characterized the presence of mobile phones in society has sparked the interest of several sectors of activity, including journalism. From the early stages of production to distribution, and then through the characteristics of content and consumption patterns, numerous changes have been introduced by these mobile devices in an activity that has been undergoing one of the most uncertain moments in its long history. This uncertainty has stemmed from the decrease in income which was caused by the emergence of new competitors, such as the online press and social networks. This bibliographic review aims at identifying the changes caused by smartphones in the production distribution and consumption of news, analyzing its effect on the epistemology of journalism. We attempt to ascertain if the increasing influence of mobile technologies in the journalistic activity has changed its nature, improving the production of knowledge. Upon closer reading of the bibliography, it can be concluded that the versatility of mobile devices has facilitated a set of new possibilities not only for journalists, namely more autonomy and a reduction in the time spent between the event and the publication, but also for consumers, who can do a mobile and personalized consumption on their screens. Due to its ability to continuously adapt to the rhythm of contemporary society, mobile journalism has become more universal and has been confirmed as a form of knowledge insofar as it responds more effectively to consumers' expectations, in particular young people's, who are moving away from journalism and thus prevent the generational renewal of readers, something which is fundamental for the media business model.

Keywords

Mobile journalism; Epistemology; Journalism; Digital journalism: Mobility; Mobile phones; Smartphones; News; Digital communication; Internet; Apps; Review article.

1. Introduction

Having been considered the seventh mass media (**Ahonen**, 2008), the mobile phone has conquered a central place in current daily life because it is a metadevice that combines several functions into an object of personal use, ubiquitous and permanently connected (**Aguado**; **Martínez**, 2006). These characteristics have allowed the mobile phone to be easily integrated in the daily life of human beings (**Jensen**, 2013).

Unsurprisingly, the success of mobile devices caught the attention of newspaper companies, which, witnessing the exponential growth of the penetration rates, realized that news consumption on these devices opened a new channel, a fact confirmed by the migration of the public to these platforms, which has made these devices become the audience's preferred medium for receiving news (**Walker**, 2019).

Through the appropriation of the new media, journalism began to undertake changes in the production, distribution and consumption of the news (**Da-Silva**, 2015), a situation that brings us to the fundamental question in this work: does the introduction of mobile devices in the journalistic process have epistemological implications in this activity?

In order to answer this question, it is important to begin by analyzing the epistemology of the activity itself, a topic that has been widely discussed over the decades. As **McNair** (1998) claims

> "the form and content of journalism is crucially determined by the available technology of newsgathering, production, and dissemination" (p. 125),

so the way in which mobile technologies broke out and took root in society justifies a debate about epistemology in the current technological reality.

Epistemological discussions about journalism are not new. Authors from diverse nationalities (**Park**, 1940; 2008; **Meditsch**; 1997; **Ekström**; **Westlund**, 2019) argue that journalism is a form of knowledge, although they represent reality in a different way than Sciences or Philosophy do, for instance (**Tambosi**, 2003).

Park (1940; 2008) seeks to establish a difference between "knowledge of" and "knowledge about", framing journalism at a point of intersection between the lesser rigor of the first and the depth of the second. In spite of this, the fact that news information is objective, true and collected in a rigorous way following ethical and deontological principles defined in professional codes makes the author consider journalism as a form of knowledge, a situation reinforced by other authors who demonstrate that exists a connection between the levels of public knowledge patterns and the news treatment (**Schroder**; **Larsen**, 2009). **Harré** (1984) states that being a social activity, science is developed from people to people and its results have a social use. Talking about news, his social use is scrutinized and discussed, shapes public opinion and fulfills the relevant mission of providing guidance to man and society (**Park**, 1940; 2008). As a social beacon, journalistic information is essential to ensure the smooth functioning of democracies because it helps citizens choose the most appropriate policies and hence, they will seek to improve societies, as with scientific knowledge.

> Due to its ability to adapt to the rhythm of contemporary society, mobile journalism is more universal and is thus confirmed as a form of knowledge by responding to consumer expectations in a more effective way

Meditsch (1997) discusses the pros and cons of journalism as a form of knowledge concluding that the weaknesses resulting from the very nature of the activity limits the universality of the conclusions because it can serve both to reproduce other knowledge or to degrade it. The author defends journalism as a form of knowledge due to its scientific and philosophical framework in traditional areas, such as Sociology or Psychology, but also because this dimension implies a greater demand in relation to the contents and to those who produce or reproduce them, in a logic of strictness of what is required for scientific knowledge.

Ekström and **Westlund** (2019) reinforce the importance of this aspect by saying that

> "journalism is among the most influential knowledge-producing institutions in modern society, associated with high claims of providing relevant, accurate, and verified public knowledge on a daily basis" (p. 1).

In addition, this knowledge is encoded in a medium language that aims to facilitate its understanding by the broad and heterogeneous public characteristic of the mass media, something that differs from the knowledge produced by scientists.

It can be argued that the scientist produces science while the journalist produces information, but it is necessary to consider that

> "science is not just a set of knowledge governed by the judgments of reason and experience. It is also linked to a cultural and axiological context and rests on values admitted by the culture in which it is inserted" (**Paty**, 1997, p. 3).

Therefore, this author considers that the universality of knowledge must be analyzed as a work of thought, as an activity of a social nature or as a science and technology system, with the repercussions that they have in the community. **Paty** (1997) also states that while the first two dimensions can be found in all eras and in all sciences, understood as a system of knowledge. The relationship between science and technology is more recent, especially since the 17th century after the link between science and technology. It is in this connection that journalism is embedded since its products –the news– are developed using methodologies similar to those of science, using a set of techniques that have evolved to follow technological progress.

In this sense, the scientific-technological dimension allows an epistemological approach to discuss whether mobile technologies have changed the way journalistic knowledge is produced and their ideal of universality has been altered. This issue is particularly important because it is in the preservation of this ideal audience that Journalism finds one of its main social justifications: that of maintaining the communicability between the physicist, the lawyer, the worker and the philosopher. While science evolves by rewriting knowledge of common sense in formal and esoteric languages, Journalism works in the opposite direction (**Meditsch**, 1997).

If the mass media produce content for wide audiences made up of non-specialists (**Ortega-Gutiérrez**; **Humanes**, 2000) and mobile consumption allows personalized consumption, to what extent does this personalization not contradict the characteristic universality of knowledge? This is a significant question in our epistemological discussion.

A second epistemological approach can be made through a fundamental concept in journalism –objectivity– which has an epistemic and an ontological sense, both of which must be analyzed in the person/object dialectics (**Tambosi**, 2003):

"the epistemic meaning applies to affirmations, to the way of knowing, (objective knowledge), while the ontological concerns the way of existence of things in the world (the objective reality)" (p. 439).

Thus, in epistemic terms, objectivity coincides with the truth, that is, there must be a confirmable fact that does not need any intermediation for its verification. Subjectivity, on the other hand, is related to the introduction of the human factor in the story, which inserts personal filters, adding elements to the narration.

In the ontological sense, objectivity is marked by the real and physical existence of people/objects or by raw facts independent of the observer, while subjectivity is more linked to intuitions/feelings that can only be confirmed by the person who feels or, in the second example, by social/institutional facts already contextualized by the observer within their social reality (**Tambosi**, 2003).

In both senses, objectivity is always linked to a visible, palpable or confirmable reality, while subjectivity is directly related to the belief that a report corresponds to the truth of the facts narrated by an observer.

Considering epistemology as the study of knowledge and the justification of belief (**Dancy**, 1985), we can say that knowledge is a true belief because it has been confirmed. The belief is confirmed if the fact reported coincides with reality, which can happen in two ways: by the dissolution of the subjectivity introduced by the observer in the transmission of that same report, making it more natural and less social, or by reducing the space between the event and its report. The first way refers to the discussion on the role of the observer in the reality codification process, repeating **Tambosi**'s (2003) argumentation regarding subjectivity. On the other hand, the second introduces a new variable –the question of space/time between the moment of the event and its report–. In this field, mobile devices influence the process to the extent that they compress the news process by accelerating production, even allowing its cancellation thanks to the possibility of making live broadcasts. This change leads to the discussion about the new role of the observer, but also to others related to the acceleration of information and the consequent reduction in its quality.

In a time where users live immersed in information, smartphones have changed the way we use and consume the news, creating a renewed ecosystem framed by new challenges to all stakeholders (**López-García** *et al.*, 2020). This paper aims to address the challenges posed by mobility to journalism, which is only possible if we do not ignore the changes observed in the media ecosystem.

2. A changing ecosystem

The introduction of a new species in a biological ecosystem causes imbalances and can lead to the disappearance of native ones. The fact that mobile devices have quickly become the preferred platform for news consumption (**Nelson**, 2019) has made it even more important to look at the ecosystem because adapting to a new reality is essential if the ancient species want to survive and can force newcomers to follow the rules of that ecosystem. Only in this way is it possible to achieve a rebalancing that ensures the survival of the ecosystem itself.

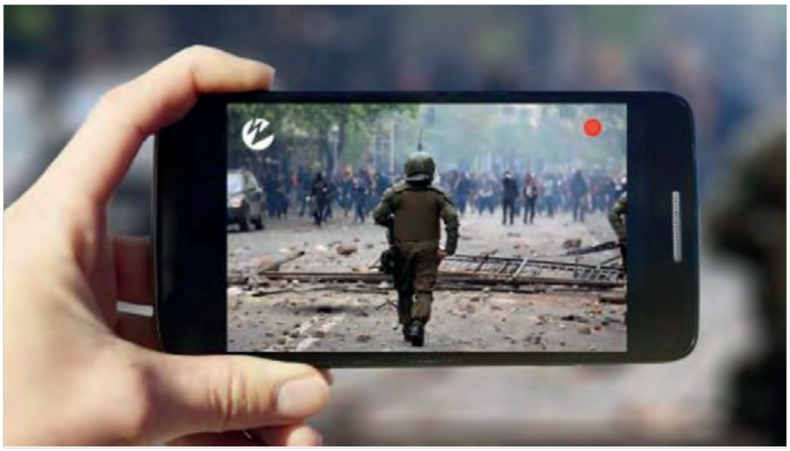
The switch from the biological reality to the mass media field led **Canavilhas** (2011; 2015) to propose three types of factors, in other words, three fields of investigation that allow us to analyse what happened when a new media arises:

- intermediatic factors (study of the mass media and their relations),
- contextual factors (consumption environments), and
- techno-environmental factors (consumption interfaces and user action on the system itself).

That means we have three areas that allow us to analyze mobile journalism from three perspectives. The most technological, as stated by **Postman** (1979), defines the mass media as machines that transmit information and encode it according to its characteristics. Therefore, it is important to dissect mobile devices, especially smartphones in order to identify the reasons that transformed it into the mass media that quickly became the most popular.

2.1. The new media and its relations

One of the various reasons that justify the success of smartphones is the fact that they are a mobile way to access the internet (**Aguado**; **Martínez**, 2006; **Westlund**, 2012; **Canavilhas** *et al.*, 2020). For that reason, it makes sense to start this point with a reference to the internet, which in October 2020 reached 4,929 million users reaching a worldwide penetration rate of 63.2% and registering a growth of 1,266% since 2000.



https://www.wowza.com/live-video-streaming/broadcast-and-OTT

Mobile access through browsers or applications (apps) greatly contributed to increase these numbers, a fact which led the journalistic market to think of the new platform as an opportunity for this activity.

The success of mobile phones is due to the combination of several aspects. Firstly, the fact that these devices are carried close to the body (**Ling**, 1997) means they are perceived as a human extension (**Lasen**, 2001; **Gant**; **Kiesler**, 2001) and therefore have a strong and emotional connection to their user (**Katz**; **Aarhus**, 2002). Secondly, because mobile phones convey the feeling of personal security to their users (**Dimmick**; **Sikand**; **Patterson**, 1994), enabling integration in groups, communication with friends (**Geser**, 2004; **Quinn**; **Oldmeadow**, 2013), mobility, fun and permanent connection (**Lorente**, 2002; **Linger**, 2002).

In the field of journalism, mobile phones in their most advanced technological version – smartphones– not only facilitate media consumption in any context (**Peters**, 2012), but also offer a dynamic multimedia *continuum* (**Barbosa**, 2013) and allow the appearance of new and more appealing journalistic narratives for the young audience. These prefer the new media (**Raeymaeckers**, 2004; **Bernal**, 2009; **Casero-Ripollés**, 2012) which offer them more attractive multimedia content (**Huang**, 2009).

Without young people, the market segment that ensures the renewal of the audience, journalism would lose sustainability, because although it has a fundamental social role, it is an economic activity that depends on demand and has a stable business model based on the segmentation of audiences (**Picard**, 2013). For this reason, journalism has been forced to adapt quickly to economic and technological changes, hence the innovation in product, distribution channels and content is essential to ensure the future (**Saad**, 2011; **Peters**; **Broersma**, 2013).

The mobile communications service providers themselves have changed from a "telecom model", based on the sale of voice services, to a "software model" in which the focus is placed on exploring the computational characteristics of the devices (**Castellet**; **Feijóo**, 2013) by exploiting the vast offer on the internet. Thus, a device that was born for interpersonal communication has become much more than that: nowadays the smartphone is an extension of our body, a multifunction device and a privileged channel for access to internet, surpassing its initial function –oral communication– to a secondary level due to technological innovations that combined the functions of a computer, camera, GPS, calculator, clock, music player or credit card in one device, among others (**Klemens**, 2010; **Canavilhas** *et al.*, 2020).

All this justifies the success of smartphones, a product whose sales increased between 2008 and 2016, stabilizing but not declining. This interruption of almost one decade in sales growth is due to the saturation of some markets and to a slower innovation dynamics (**Richter**, 2019). Nevertheless, the mobile devices continue to be the most transversal medium since their distribution in the various geographies of the globe is the most balanced of all mass media. For all these reasons, smartphones an object of innovation, change, and renovation of the older media (**Goggin**; **Hjorth**, 2009) offering a wide range of possibilities for bringing old and young media together in one device (**Madianou**; **Miller**, 2012).

2.2. Mobile consumption environments

Space is a fundamental variable in the field of journalism. We can refer to space as distance, which has always been one of the obstacles to distribution but, in this case, we are mainly interested in space as a consumer environment since mobile devices are characterized precisely by their ability to ensure the contextual users news consumption (**Silva-Rodríguez**, 2013).

The printed press, for instance, has varied their consumption environments: from the times of low literacy when the illiterate learned of the news in the reading clubs until today, consumption has gone from a static assembly to an individual and mobile one. In this case, the phenomenon occurred more because of the increase in literacy rates than because of the characteristics of the newspaper that always has been portable. The radio has also undergone a progressive process, with mobility arising thanks to the appearance of personal receivers and later through its inclusion in automobiles. As far as television is concerned, mobility has also existed since the appearance of digital terrestrial television (DTT), but the mobile consumption of this medium has only truly grown with smartphones.

This culture of mobility (**Kischinhevsky**, 2009) compels us to rethink information consumption in different contexts. If places cannot be separated from their context of experience (**Santaella**, 2007), the fact that this experience now takes place anywhere due to the ubiquity offered by the smartphone (**Goggin**; **Hjorth**, 2009; **Struckmann**; **Karnowski**, 2016), opens up new perspectives for research.

If until now all mass media had started in group consumption and only later evolved towards individual consumption, in the case of smartphones we are faced with a different situation because the collective spaces they have nothing of collective once they allow a consumption in an individual screen (**Santaella**, 2007),

This means that even though one is within a group, consumption on the smartphone is individual, which introduces two variables that journalism needs to learn how to deal with: mobility, and personal consumption. In addition to these two variables, we must add a third one –the context– because news consumption is something that occurs in a specific place (**Peters**, 2012). That means that news consumption in mobility implies changes in news production, as we will see later.

2.3. Consumption interfaces and user role on the ecosystem

One of the main changes in the techno-environmental factors was the hegemony of small screens as an interface for news consumption. Previous mass media –press, radio and television– started to be consumed on smartphones, tablets and wearables, such as smartwatches and glasses (e.g, *Google Glass*). More recently, personal assistants (*Alexa*, *Siri*, etc.) added the possibility of interacting via voice replacing the usual touch interfaces of mobile devices.

The media interface is assumed here as a place of interaction that evolves and co-evolves with its users because it is a space for innovation (**Scolari**, 2018). In the case of smartphones, the design of this type of interface is more difficult due to the small size of the interaction surface and the fact that users move between different contexts (**Gong**; **Tarasewich**, 2004) while interacting. This is due to the fact that in addition to portability these devices have in common one characteristic: they are connected to the internet,

> "(...) a multimedia channel, which tends to emulate and integrate many older media, blurring their boundaries without really supplanting them" (**Pauwels**, 2005, p. 609).

As stated by **Goggin** and **Hjorth** (2009), the characteristics of mobile media provide new ways of seeing, reading, listening and touching, transporting the media process to new contexts of consumption and enabling new forms of participation for the people.

These ways of participation have grown enormously with Web 2.0, a term created by *O'Reilly Media* in 2004 to mark a new level on the Web in which users have come to have a more interactive and participatory role through the production of information on blogs, video platforms, social networks, etc. Journalism ceased to be the centre of the media system, and began to share this space with users, the so-called prosumers (**Jenkins**, 2008) or "produsers" (**Bruns**, 2008).

Furthermore, the role of consumers is not limited to participation, since the level of demand in relation to journalism has also risen:

> "The mobile phone, in the hands of a digitally literate population, has fundamentally changed the relationship between the media and consumers of news. Under the old model, journalists would tell the public what they needed to know, when they "needed" to know it (i.e., when it suited them). Today, consumers of news pull down what they need, when they need it and how they need it" (**Jukes**, 2013, p. 5).

This set of technological changes has radically changed the way we interact (**Geser**, 2004), which has repercussions on the media ecosystem, as we will see later.

3. Mobile phone as a journalistic tool: production

Although an interesting amount of scientific production in the field of mobile journalism can already be accessed, the lack of analytical and practical studies on the stages of production, distribution and reception of journalistic content on mobile devices is still a reality (**López-García** *et al.*, 2020).

In the field of journalistic production, one of the most studied areas has been the use of smartphones as a new tool (**Bivens**, 2008; **Westlund**, 2013; **Andrade** *et al.*, 2015) or the analysis of experiences made with mobile devices (**Blankenship**, 2016; **Mills** *et al.*, 2012). This set of studies has arisen due to the fact since very early it became evident that the cell phone challenges the journalism practices (**Mielniczuk**, 2013).

One of the first changes related to the appearance of mobile devices, in this case still with feature phones, was the possibility of establishing permanent contact between the newsroom and the journalist who collects information at the events. The journalist sent to the place of the event is so absorbed by his work that he loses the notion of the more global context, missing new information related to that event that comes to the newsrooms through different sources. Mobility communication facilitated by feature phones now allows the newsroom to send new information to the journalist that opens new paths of investigation and allows questions to interveners about data that have emerged but are unknown to those who are at the place where something is happening.

The introduction of this factor brings an epistemological change because the ontological subjectivity –the existence of a raw fact about which the journalist was collecting information in a certain perspective– can suffer a change motivated by the arrival of new information that leads the journalist to ask new questions to stakeholders or even interviewing new characters. With these quotes, the journalist seeks to make his work more objective by transferring responsibility for the information to the interviewees (**Zelizer**, 1995) who, when confronted with new information, confirm or reject it, thus giving more credibility to the news.

Another important change was the replacement of image equipment, with digital cameras being replaced by smartphones. In addition to the miniaturization of equipment, the fact that they are discrete and easy to handle devices (**Maccise**; **Marai**, 2017) made it easier to obtain images in spaces where journalists were often prevented from taking them. With this change, it became possible to offer information consumers similar perspectives to those who have direct participants in events.

In a first moment, there was some distrust from the image professionals in relation to the use of smartphones in capturing images (**Guerrero-García**; **Palomo**, 2015). However, the connection between smartphone manufacturers and camera or lens manufacturers, such as *Leica* or *Zeiss*, together with the increase in the number of cameras per device, enhanced the photographic capabilities of these devices transforming them into high quality machines. Moreover, native applications (apps) were added, which made it easier to edit the images on the device itself and send them straight to the newsroom. A similar process occurred with sound and video, a situation that transformed those equipment's into true personal editing studies, making the physical presence of these professionals in the newsroom unnecessary (**Da-Silva**, 2014).

The aesthetics of photography has changed as well (**Germen**, 2014) due to the fact that it has become possible to take images anywhere, at any time and with automatic shutters that in thousands of seconds offer thousands of perspectives on the object or situation photographed. If in part this change had already occurred with the appearance of digital cameras, the fact that the images started to be made with a common object which we carry around at all times further enhanced this possibility.

Not all types of article formats and multimedia content from the news site could be auto-directed to mobile news platforms. Journalists started to think one step ahead when reporting on breaking news to ensure that it was also displayed on mobile devices (**Westlund**, 2013, p. 15).

> "The omnipresence of smartphones as imaging devices has a strong impact on the fact that they encourage, help us to take photos in places, instances, settings, occasions, we would not otherwise think of photographing" (**Germen**, 2014, p. 307).

Once again, we can observe ontological changes because no longer are there limitations in the number of images that could be taken. From the 12, 24 or 36 photos of the analogic system, we switched to digital cameras with limited capacity and, later, to usable smartphones that allow us to quickly capture an unlimited number of images that are immediately available in the cloud. Not being concerned with spatial limits, the journalist tries to make the captured image convey reality the best way possible. Although there is always human intentionality resulting from the photographer's positioning in relation to the space where the action takes place and the professional's own aesthetic criteria, the increase in the number of images captured increases the probability that some of these images reproduce reality more naturally.

In the field of the moving image, in addition to the changes related to capturing and editing common to photography, another important change appears: the generalization of live broadcasts. What previously required expensive and complex production, such as outdoor cars, human resources, satellite rental, etc., became possible with a simple device for personal use and without the need for more human resources than the journalist, thanks to devices and high-speed networks. Here too, more objectivity is introduced, both in epistemic and ontological terms. In the first case because being live the fact is confirmed; in the second, because in being raw images we have something that ontologically is the mere transmission of a real event.

In addition to the evolution of the devices themselves, the development of the App Stores deserves mention, as it is this change that allows the treatment of raw content. Since the importance of improving the processing and storage capacities of the equipment and the permanent connection to the internet was indisputable, the role of apps cannot be underestimated because they allowed smartphones to be more than a device for capturing and sending raw content (**Goeldi**, 2018).

> "Initially planted as a secondary complement to platforms, virtual application tiers ('app stores', with Apple's permission) have in only four years been converted in the axis on which the main transformations of the mobile ecosystem and its development horizons move" (**Aguado**; **Castellet**, 2013, p. 41).

These apps, which also influenced consumption, transformed smartphones into a mobile and personal newsroom by allowing them to edit the content, its composition and by making it available to the public.

This set of changes has given more strength to the so-called MOJO, a way to telling stories by journalists that they are trained and equipped for being mobile and technically autonomous (**Podger**, 2018). Initially called backpack journalism (**Steven**, 2002; **Strong**; **Zafra**, 2016), in reference to the possibility of a journalist being autonomous thanks to a backpack with a laptop computer, a digital camera and a microphone, it was switched to pocket journalism (**Renó**, 2011; **Twist**, 2005) that allows you to do all this with one device: a smartphone. With these mobile devices, journalists started to do their work more quickly due to the ease of handling, transport and mobility (**Maccise**; **Marai**, 2017).

Another aspect where changes have occurred with implications in the field of production was the participation of users in the news process. The people formerly known as the audience (**Rosen**, 2006) gained a place in the new media ecosystem leading to the emergence of movements such as citizen journalism (**Gillmor**, 2006; **Meso-Ayerdi**, 2005), participatory journalism (**Bowman**; **Willis**, 2003; **Hermida**; **Thurman**, 2010) or collaborative journalism (**Glaser**, 2004), among others. This movement, born with Web 2.0, has evolved over the years and has challenged mainstream media with the emergence of new informational players that aroused the interest of users (**Hermida**; **Thurman**, 2010; **Newman**, 2012; **Sasseen**; **Olmstead**; **Mitchell**, 2013). Mobile devices have given citizens even more strength since they have made it possible to improve the technological capabilities of content production with a reduced investment in a device already used in their daily lives.

The importance of this phenomenon in the scope of this work is not so much the role of citizens as producers of information, but as providers of information, that is, we are not interested in citizens' participation as playground spaces, but those in which the citizen works as a source (**Domingo**, 2011), with the media themselves asking for the collaboration of users, sending complaints, as it happened on the Web, but now encouraging the submission of photos and videos. This participation allows the creation of a giant network of collaborators, which, due to its dispersion in the territory, enables access to any event more quickly, even though the quality of the information collected may be lower. Any sudden event that occurs can be reported with the use of amateur images captured by citizens who were on the spot at the time, a situation that can be seen as an approximation to objectivity in the ontological sense, since the citizen is limited to trying to capture the moment with no other purpose than to register a momentary reality.

The work inside newsrooms has also undergone changes because the production of mobile news requires interdisciplinary work among journalists, designers and programmers, among other specialists (**Palacios** *et al.*, 2015). If there is a tendency abroad for the individualization of work, within the newsroom the movement goes exactly in the opposite direction since the contents are more complex and require the participation of so-called techno-actors in the production process that they assume to have the task of solving technical problems that allow the appearance of more appealing types of contents (**Canavilhas** *et al.*, 2014). Each professional tries to enhance the characteristics related to his work in order to provide a good user experience, but he underlines that there are epistemic distances between the logic of computational thinking, the artistic conception of visual culture and the textual and contextual journalistic model. The result of this professional miscegenation was the birth of new content formats and new ways of storytelling (data journalism; parallax reporting) that differentiate web and mobile journalism from that done in other media. This situation changes the epistemological nature of the journalistic product insofar as by improving the way of transmitting complex information contributes to a consolidation of knowledge.

4. Mobile devices as a consumption platform: content and distribution

Among the changes resulting from the integration of mobile devices in journalism, the way the content has changed (**Parry**, 2011) is one of the most visible to the public.

A first alteration is related to the very nature of the content, which started out as monomedia and currently offer all types of multimedia content (**Salaverría**, 2014) that portray situations in a more realistic way (**Zelizer**, 2019).

In parallel with this change, the growth in consumption on mobile devices led to an increase in the supply of breaking news:

> "Not all types of article formats and multimedia content from the news site could be auto-directed to mobile news platforms. Journalists started to think one step ahead when reporting on breaking news to ensure that it was also displayed on mobile devices" (**Westlund**, 2013, p. 15).

This offer encouraged a trend towards the consumptions of short and contextless news (**Molyneux**, 2018), something that was already stimulated by the characteristics of the devices themselves, namely the mobility and the reduced dimensions of the screens of these devices.

It is also the technological characteristics of smartphones that enable the consumption of multimedia content with different degrees of complexity, from the simplest ones that cross various types of content (text, sound, image), to the most complex, such as immersive content (**Domínguez-Martín**, 2015; **Aitamurto** *et al.*, 2020) of virtual reality, augmented reality, 360º contents, etc. With or without recourse to cardboards or HMD (head-mounted display), immersive content is one of the great news brought by smartphones and has originated in the first immersive journalistic production in virtual reality: "Hunger in Los Angeles", by **De-la-Peña** *et al.* (2010).

This kind of immersive content, which technically and stylistically is still in its early stages, offers sensory experiences through the sensation of presence in a real recreated space or in an imaginary space created for that purpose (**Owen** *et al.*, 2015), using technological, aesthetic and interactive resources to eliminate physical boundaries in a sensorial way (**Domínguez-Martín**, 2015). By creating a strong sense of presence (**Aitamurto** *et al.*, 2020), immersive content allows users to become more emotionally involved with the content (**Grau**, 2007), which represents a differentiating feature of mobile journalism in relation to other visual content and has an economic potential to be explored.

Despite this potential, newspapers' greatest bet has been on 360º video content, perhaps because they are technically simpler and cheaper. By privileging spatial immersion over sensory immersion, journalism reduces both the level and the emotional involvement, preventing total immersion (**Colussi**; **Assunção-Reis**, 2020) and thus destroying one of its differentiating characteristics.

4.1. Distribution for mobile devices

At a second level of changes, we already have a mixture of the content and distribution of information. Some of these changes had already occurred with the appearance of journalism on the Web, but they gained a new impetus with the possibility of distributing information to a device for personal use that is permanently connected to the network (**Aguado**; **Martínez**, 2006).

These mobile devices' potential for the reception of personalized information makes it possible to switch from a mass content distribution to a personalized distribution adjusted to the user's preferences. This possibility of personalizing the information may result from the user's own choices, who agrees to receive notifications from the media with the highlights of the day or updated information. However, it can also result from reading our browsing habits made through trackers (cookies) installed in browsers that linked to powerful databases cross our personal information to offer a multitude of products and services.

It is undeniable that our digital footprint opens the door to a personalized distribution of information, a situation that has some advantages for companies, but it also has many disadvantages for consumers and society. From the perspective of media companies, the possibility of offering us the information they know indicates our preference is an advantage because it responds to our difficulty in managing the enormous amount of information available, a situation that has benefited curators such as *Google* and *Facebook* (**Nelson**, 2020). In addition to this advantage, there is the possibility of selling our data and preferences to advertisers.

From the consumer's perspective, the advantage associated with personalizing information brings some loss of privacy and, in a mix of personal and social disadvantage, its incarceration in an information bubble (**Pariser**, 2011) that limits its global and contextual view.

Referring to current times as an "era of context", **Scoble** and **Israel** (2014) argue that there are five forces available to each user when they touch a screen with their fingers:

- mobile devices,
- social networks,
- data,
- sensors, and
- locations.

The authors believe that these forces are changing our experience as buyers, users, patients or travellers, while also changing the business world. Specifically in the field of journalism, **Aguado** and **Castellet** (2013) state that the news can take advantage of the geolocation, context of use and Augmented Reality to increase the quality of the content. **Schmitz-Weiss** (2015) provides the example of weather information apps to illustrate the advantages perceived by consumers in the consumption of geolocalized information, drawing attention to what she called spatial journalism.

The routines of users' contact with the news have also changed. On the one hand, the massive use of mobile devices deepens the transition from a "pull system" to a "push system" (**Fidalgo**; **Canavilhas**, 2009), in other words, it is no longer the user who looks for the information but the information that looks for the user. This change had already occurred with the appearance of information aggregators (**Canavilhas**; **Satuf**, 2016), but apps have further underlined this trend. By allowing these apps to send updates on certain topics, the user opens his personal communication channel, receiving information updates at any time without having to look for them. A recent study (**Wheatley**; **Ferrer-Conill**, 2020) confirms this trend by showing that push news is a consistent trend in European media distribution strategies, with information being sent during periods of low consumption to keep the consumer permanently connected to the media.

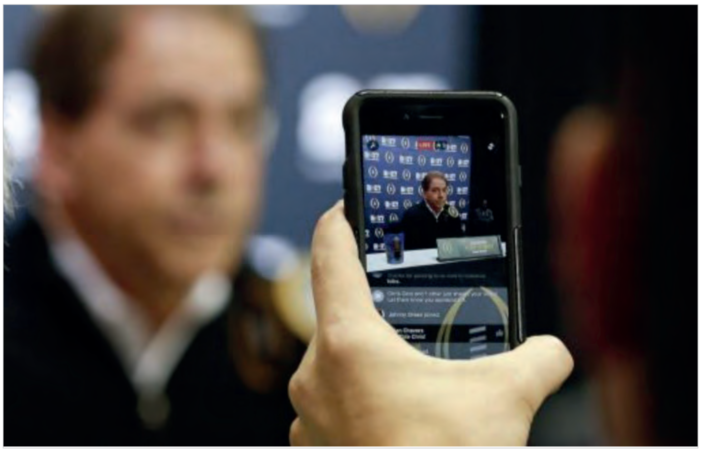
This continuous supply of new information is one of the problems of journalism as knowledge because it implies a speed of production, which in comparison with Science, is much faster and less profound. However, **Meditsch** (1997) reminds us that speed is a characteristic of modern society, which can represent an advantage in relation to other forms of knowledge in its ability to adapting the social needs.

The speed of journalism became instantaneous (**Bradshaw**, 2014), changing the periodicity that characterized traditional daily information (newspapers), three to four times a day (TV) or hourly (radios), thus reducing the gap between the moment of the event and its dissemination. This acceleration of information responds to a human need to receive information updates whenever a situation of great social impact occurs (**Schneider**, 2007). But it also calls into question the hierarchy of values in journalism, demoting the commitment to truth and objectivity to levels below that of instantaneity and overestimating speed (**Moretzsohn**, 2002). More than the acceleration observed in the production and distribution of information, which is characteristic of journalism and does not alter its epistemological nature, it is the instantaneity that can strike its value as knowledge, as it is less rigorous to fulfil shorter information cycles.

4.2. Consumption in mobility

Mobile devices have changed the way users consume news (**Westlund**; **Färdigh**, 2015), even if compared to the medium that is closest to them: The Web. Though distribution is made through the same technological infrastructure –the Internet– consumption either on a computer, or on a smartphone, is different due to the technical characteristics of the devices and mobility, which are common features, despite still displaying notable technical differences, due to the decrease in the size of consumer platforms (**Pellanda**, 2009).

Although mobility truly started with the miniaturization of radio receivers in the late 1960s, it is with smartphones that consumption truly gains mobility. The radio itself, a pioneer in mobility in electronic devices, felt the need to gain visibility on smartphones to survive in the new ecosystem (**Pedrero-Esteban**; **Herrera-Damas**, 2017). With mobile devices, the information requested is provided ant the right time and place (**Wolf**; **Hohlfeld**, 2012). This possibility opens a set of potentialities when crossed with the change from group consumption in the living room or cafe to individual and mobile consumption on the smartphone.



https://www.irishtimes.com

With a personal and portable device, users started to take advantage of all available moments to update information, so the typical cyclical consumption marked by the periodicity of the media gave way to an always on consumption in response to the change in distribution, which also became instantaneous, as it was mentioned in the previous point. This is a good example of the way in which the media have quickly adapted to the new consumer's demands, providing information throughout the day instead of waiting for information services with fixed schedules. When compared to older media, daily consumption on mobile devices happens more often, it is distributed over more moments, and sessions are shorter (**Molyneux**, 2018), a situation that largely relates to consumption on mobility that occurs in public transport or when the consumer is on hold.

This situation reinforces the idea that the consumption context is an important variable in the process. In fact, mobile journalism has enabled users to consume anywhere, anytime and in new content formats adapted to devices (**Dimmick** *et al.*, 2011). In this new mobile reality, the context assumes a crucial importance because it conditions the emission and presents a potential for economic exploitation. The context is assumed as a multidimensional concept that includes not only the place or time, issues which are more linked to the consumption space, but also other technological and cultural dimensions (**Courtois** *et al.*, 2013) that influence the process, due to the fact that the mobile news consumption occurs is a specific place (**Peters**, 2012) with unique characteristics.

The mobility of the consumer makes it possible to send information about the space where the user is, in addition to also facilitating what **Canavilhas** (2013) calls "divergent content" when moving from multimedia content by juxtaposition, coordination or subordination (**Salaverría**, 2014), for a distribution in which the contents recover their monomedia nature (text, sound or video), but are distributed according to the situation in which the user finds themselves, which can be transmitted by the technologies incorporated in the reception platform. Thanks to the accelerometer and gyroscope, for example, it is possible to know if the user is on the move, whether walking or driving: in this type of situation, the content must be provided in audio format. Another possibility is the use of GPS: locating the user in a space such as a library or a church, for example, the ideal is to send the content in a format without sound, so it is preferable to send the information in textual format. Thus, we would have a contextual distribution of information that can take into account not only the user's location for thematic purposes, but also the ideal format in each situation (**Canavilhas**, 2013). This divergent distribution is, in essence, a return to the initial nature of each type of content, but it can introduce some subjectivity due to the difficulties in adapting some themes to a certain media language. If multimediality and immersive content can make information more objective, the return to monomedia content goes exactly the opposite way.

5. Mobile journalism: economic issues

The negative economic impact of digital journalism on media companies remains a problem that has not yet been resolved during its 25 years of life (**Salaverría**, 2019). Sharing the same channel, mobile journalism is experiencing the same problem, however there are some untapped potentials.

> "The combination of a technological revolution, new (and as yet not fully understood) business rules, and global recession has created, to use the cliché, a 'perfect storm'" (**Jukes**, 2013, pp. 1-2).

The technological revolution brought new players to the information market, such as Google and Facebook. These are platforms that quickly managed to take the largest share of the advertising market, calling into question the traditional models of journalistic business and leaving the mainstream media in difficulties (**Pauwels**; **Picone**, 2012). These platforms have also been joined by free digital publications, blogs and social networks, that also challenge the centrality of traditional media.

The invasion of mainstream media space by foreign elements has fragmented audiences and created new consumption habits. The new generations moved away from the consumption of information in traditional media (**Túñez**, 2009; **Brites**, 2010) and knowing that the future of any business depends on the renewal of its consumers audience, (**Lauf**, 2001) the loss of young consumers substantially reduces the chances of survival of the media, making it necessary to look for new business models.

> Mobile journalism is the fastest growing journalism, so it has challenged some of the fundamentals of this activity, which is used to undergoing slow evolutions

The inability of legacy media to attract young people to read news, in conjunction with the flight of audiences to consumption on mobile platforms (**Steensen**; **Westlund**, 2020), leads to a bet on mobile devices because journalism must be where the public is. Knowing that smartphones have become a mandatory companion for young people (**Cevallos**, 2009), it should be a priority develop journalistic work that focuses on such devices, using formats and languages that respond to the expectations of new generations (**Costera-Meijer**, 2007; **Huang**, 2009) as this is the only way to renew the reader base.

This scenario prompts **Jukes** (2013) to say that journalism faces difficult obstacles to overcame because, to the economic problem, it adds the loss of public confidence in its role of watchdog and runs the risks of losing its social relevance and fails to influence public opinion.

Regardless of format or language, journalism aims to build a sense of community and keep the population informed so as to help citizens when they are called to choose their leaders (**Kovach**; **Rosenstiel**, 2014). For that, it needs to be consumed, a situation that previously was measurable by using the numbers related to sales and audiences and which nowadays is dispersed by a myriad of metrics. Tools such as *Google Analytics* or *ChartBeat* allow the media to know almost everything about their users, a situation that contrasts with the presumed audience from the perception of the journalist or from market studies carried out with samples.

In addition to the exact numbers of audiences measured by these tools, there are also “likes”, “shares” and other easily measurable variables that offer a much richer audience than the data available so far and allow the required segmentations by advertisers. The problem is that these new ways of measuring audiences allow us to realize that the media now have an unbeatable competitor in social networks due to the capillarity of their operating model.

Subscriptions to the paper-based newspaper have been replaced by digital subscriptions, constituting an advantage for the digital format due to the easy dissemination, but this audience represents a tiny part of the global audience measured, based on traffic on news sites. Kiosk sales which previously represented most of the audience, still have to find a substitute.

What currently happens in premium journalism models is similar to what happened in the past when people stopped by the kiosks to read the covers and headlines without intending to buy the newspaper. The sales themselves, which were equally used by advertisers to choose newspapers to invest in, have not been replaced by any new model. Clearly this situation brought along economic and social repercussions.

With the exception of successful niche publications (**Anderson**, 2006) or global newspapers such as *The New York Times*, whose digital revenues have already surpassed traditional ones (**Tracy**, 2020), most media bet on the freemium model (free + premium), thus combining the offer of free content with other paid content (**Casero-Ripollés**, 2010), however, the revenue does not seem to work. Despite this, **Anderson** (2009) claims mixed models because free brings readers and some of them are supposed to pay to save time for the things they like or for what can give them status. As **Gómez-Barroso** (2018) highlights, there is still a lack of economic models that explore the personal (public) data available in journalism and in advertising.

The fact that the consumption of mobile devices is personal and takes place on a platform with very advanced technological resources nowadays allows us to have statistics with a higher reliability than any other previous system because it is possible to know what is being consumed, how long for, at what time and where it is being consumed. This situation allows for the transition from traditional financing plans (sales + advertising), to 360º models (**Canavilhas** *et al.*, 2016) that combine the sale of content per unit of information, new forms of advertising that involve the user, crowdfunding, the sale of apps and the inclusion of digital accesses to the media, not only in the packages sold by ISPs (internet service providers), but also on mobile devices.

The improvement in the economics of the media enterprises would make it possible to combat the precariousness that has become established in the profession, with an impact on the quality of the journalistic product as a form of knowledge.

> Portability, ubiquity, media functions of the phone and the “appification” have enabled the transformation of these devices into tools that offer more autonomy to journalists

6. Epistemology of mobile journalism

Mobile journalism is the fastest growing type ofjournalism (**Perreault**; **Stanfield**, 2019) and so it has challenged some of the fundamentals of this activity. Despite its close connection to journalism on the Web, mobile journalism has particularities that once again call for the discussion of this activity's epistemology.

In this paper, the changes introduced by mobile devices in journalism have been identified, aiming at understanding which of the various stages of epistemological changes are most evident, if they exist.

In a first epistemological approach, we tried to discuss if journalism produces knowledge. By reading the bibliography it is possible to confirm this hypothesis since mobile journalism follows rigorous work methodologies, is guided by ethical and deontological principles (**Park**, 1940; 2008), and provides periodically accurate and confirmed knowledge (**Ekström**; **Westlund**, 2019).

Another important epistemological discussion is related to objectivity, with an epistemic approach (way of knowing) and an ontological approach (way of existence), following **Tambosi**'s (2003) approach. In the first case, objectivity coincides with truth while subjectivity is related to the intermediary who reports the event. In ontological terms, objectivity is related to the reality or facts independent of the observer, while subjectivity is more linked to the viewer feelings. We try to situate this second discussion in the field of content production, trying to verify what influence mobile devices can have as a professional tool for journalists.

Within the scope of production, it appears that portability, ubiquity, media functions of the phone and the "appification" allowed for the transformation of these devices into tools that offer more autonomy to journalists. Furthermore, smartphones help to decrease the existing space and time that mediates between the event and its publication, reducing human intent and increasing objectivity.

When collecting data, the mobile phone allows for an epistemological change because the fact that it can receive new information from the newsroom when already at the event site allows the introduction of changes in the approach to the interviewee and the stakeholders. On the spot, the journalist can confront the stakeholders with new data and obtain an immediate reaction that he will transcribe as a quote. There is an increase in objectivity here that gives credibility to the news in the face of the growing number of unidentified sources that have appeared in the news. If this advantage allowed by a simple mobile phone adds the possibility to record these statements in audio or video, there is an increase in objectivity and in this case, it is already a gain allowed by smartphones.

Image is also an area where ontological changes can be confirmed. The infinite storage capacity of a smartphone connected to the cloud, combined with the remaining technological potentials of smartphones, allows recording the event from various perspectives, reducing the reporter's intentionality. The combination of the technical capabilities of the devices with the high-speed computer networks also allowed the greatest use of rights, which, being made by a mobile device from a position in the middle of the public, permits an approximation of the content transmitted to reality, which is why, ontologically more objective. With regard to the characteristics of the media, in this case in the field of reception, the most important question lies in a factor that differentiates journalism for mobile devices from traditional journalism: does the possibility of personalizing information due to the characteristics of the medium contradict the universality of knowledge?

Jensen (2013) states that the novelty introduced by mobile devices is the perfect way in which these devices were integrated into daily practices in a synchronous, localized, and individualized way. The integration news consumption patterns in daily routines leads to relative isolation, because although consumers are in the middle of many people, only users can see the small screen. (**Van-Damme** *et al.*, 2015). However, this personalization is more related to the context of consumption in mobility and to the formats adapted to the devices than to the individualized distribution of content.

The media have been advised to serve the niches well instead of serving the masses poorly (**Jarvis**, 2009) which in the case of devices gains greater importance because they are personal channels that allow content to be adapted to the consumer. Such a situation does not invalidate the information being used by the community (**Harré**, 1984) and, thus, remains universal knowledge. As in the specialized press, the more specific the theme is, the more demanding the readers are, and since they are specialists in that subject, demand more depth in the treatment that journalists give to topics.

In web journalism, and with greater accuracy in smartphone journalism, the response to users' expectations assumes a fundamental importance due to the existing technologies for the measurement and knowledge of consumption habits. The metrics currently available make it possible to interpret the data resulting from the measurement of the news item (**Henshaw**, 2006) with such precision that journalists can better understand their audience, deepen the relationship with it, and adapt the content so that users can use it, identify themselves as truth tellers (**Usher**, 2018) and, therefore, knowledge producers.

"When collecting data, the mobile phone allows for an epistemological change because the fact that it can receive new information from the newsroom when already at the event site allows the introduction of changes in the approach to the interviewee and the stakeholders"

This approach of journalism to science is also made possible by the use of content more suitable for explaining events and phenomena, such as interactive graphics, 360º video, etc. For this, it relies on the participation of the so-called techno-actors, the new figures who gain more presence in the newsrooms. Although from different points of view, these professionals seek to improve the user experience, facilitating faster access to information (informatics), improving the usability and graphic aspect of the content (design) and producing contextualized and credible information (**Canavilhas** *et al.*, 2015). It is from the joint work of these professionals that more elaborate content is born which responds to the information needs of the most demanding consumers and, above all, to the new generations. As previously mentioned, the survival of journalism depends on its ability to ensure the generational renewal of consumers, as stated before, which can be done using the type of content that most attracts them.

> The novelty introduced by mobile devices is the perfect way through which these devices were integrated into daily practices in a synchronous, localized and individualized way

Content is precisely one of the areas where journalism for mobile devices has shown that it is possible to offer something different from the legacy media. Using the mobility, portability and technical characteristics of the devices, formats for smartphones emerged, such as immersive content, namely 3D sound, augmented reality and virtual reality. The use of the word "reality" in the designation of this type of content seeks to convey to users the idea of truth, simulating an environment similar to that in which the action takes place, transporting the user to three-dimensional spaces and enabling sensory experiences (**Domínguez-Martín**, 2015; **Owen** *et al.*, 2015). In its connection to journalism, this reality is a form of objectivity, both in the epistemic and ontological strands since it removes the intermediaries and interpretations of the space where the action takes place, freeing the user for a free exploration that transforms him into the individual he feels.

Finally, the economic aspect may have an epistemological influence in journalism as the quality of the content is directly related to the ability to hire human and technological resources. The economic fragility of legacy media motivated by the exhaustion of its business model leads to social discredit (**McChesney**, 2013; **Casero-Ripollés**; **Izquierdo-Castillo**, 2013) which in turn leads to a loss of audience, thus entering a negative spiral: the reduction in revenue leads to cuts in the newsroom, which leads to an increase in the workload for journalists, who resort more to agency information. Thus, there is a clear impoverishment of the journalism produced, also called "churnalism" (**Harcup**, 2004; **Johnston**; **Forde**, 2017), which is limited to recycling information to produce content with low informative value for which users are not willing to pay and which has no social relevance nor constitutes knowledge.

A final word to emphasize that the remarkable growth in the consumption of push news, in other words, content that is characterized by its superficiality, could move journalism away from the characteristics of the sciences that produce knowledge. However, we must never forget that this lower complexity is balanced with greater speed, which responds to the needs of a more accelerated society that requires a greater cadence of information (**Meditsch**, 1997) and which value this kind of knowledge. The key is to maintain a permanent link between these informative "snacks" (**Molyneux**, 2018) and contextual journalism, thus functioning as a starting point for consumption and never as an arrival point.

7. Final notes

The fact that Web journalism and Mobile journalism share the same channel means that there is a great proximity between the themes discussed in this work. The great difference that separates them relates to the characteristics of access technologies, but still a mobile device is a computer which has greater portability than desktops, laptops and even tablets. Perhaps for this reason, **Bui** and **Moran** (2020) claim that more and more digital journalism is becoming mobile.

In a broad perspective, we agree with **Salaverría** (2019) when he states that the area of digital journalism, as mobile journalism, has become a fertile field for research, presently offering a multiplicity of approaches and methodologies specific to work in this field. The traditional area of journalism, already influenced by Sociology and Psychology, has received expertise knowledge from Design and Informatics, and has managed to transform itself into an area of mutual fertilization. That is why many avenues of research have already pioneered but are still in need of deeper and greater volume research so that meta-research and new theories can be achieved. Several authors (**Ekström**; **Westlund**, 2019; **Fortunati**; **O'Sullivan**, 2020) identify some of the questions that deserve a deeper and more thoughtful reflection when epistemological and technical issues related to mobile news are discussed.

First of allt, it is interesting to continue developing studies in the field of audiences in order to reinforce understanding of why mobile consumption had such a rapid increase, not only among new generations but across the board. Another important line will be to know if the increase in speed in the circulation of information has an impact on the way people perceive the role of journalism as a form of public opinion.

> The joint work of journalists and techno-actors (designers and computer scientists) allows for the production of news content that satisfies the information needs of the most demanding consumers and, above all, of the new generations

In the field of production, issues related to the changes caused by mobile devices in terms of production costs, the appearance of new professions and the skills demanded from journalists, deserve to be further studied. The conclusions of these works must be analyzed in the context of the new labor relations within companies and their repercussions on the epistemological ties with the profession.

> The economic fragility of legacy media motivated by the exhaustion of its business model leads to social discredit which in turn leads to a loss of audience, thus entering a negative spiral: the reduction in revenue leads to cuts in the newsroom, which leads to an increase in the workload for journalists, who resort more to agency information

As this area is strongly linked to technology, the opening of new lines of investigation is a constant since mobile journalism refers not only to digital content for smartphones and tablets, but also for glasses and smart watches, among other wearables. In this arena, research in the field of content, namely in terms of languages, formats and genres is fundamental, as it explores its connection to the field of design and usability. Equally important is to use the experimental method to assess the impact of individual consumption on mobility in the perception of users' understanding and to ascertain what to change in the content in order to compensate for any loss of effectiveness motivated by less attention devoted to the content.

All these new devices have two characteristics in common: ubiquity and personal use. This situation opens enormous potential for the collection of reliable big data, one of the traditional problems in journalism research. For this reason, the area of Statistics also acquires greater relevance in the studies to be undertaken in this field. The treatment of these personal data also raises issues of great relevance related to confidentiality, so Ethics is another area called for research in the field of mobile devices.

Finally, the study of new models for the economic viability of journalism are another important field of work, as the quality of the final product depends on the conditions of production, namely the existence of human resources and technical means that allow journalism to develop its social role.

For all these reasons, it is believed that Mobile journalism is an area with great potential for growth in the field of research, in addition to the fact that it brings together a set of characteristics capable of facilitating an approximation between research undertaken in academia and the needs of communication companies facing an unprecedented crisis. Perhaps the solution lies precisely in the joint work between two worlds that have always lived 'back-to-back', but that due to the technological and social acceleration are compelled to cooperate.

8. References

Aguado, Juan-Miguel; **Castellet, Andreu** (2013). "Contenidos digitales en el entorno móvil: mapa de situación para marcas informativas y usuarios". In: Barbosa, Suzana; Mielniczuk, Luciana (org.). *Jornalismo e tecnologias móveis*, Covilhã: Livros Labcom, pp. 25-50. ISBN: 978 989 654 101 9

Aguado, Juan-Miguel; **Martínez, Inmaculada J.** (2006). "El proceso de mediatización de la telefonía móvil: de la interacción al consumo cultural". *Zer*, v. 11, n. 20, p. 319-343.
https://ojs.ehu.eus/index.php/Zer/article/view/3770

Ahonen, Tomi T. (2008). *Mobile as 7th of the mass media: Cellphone, cameraphone, iPhone, smartphone*. London: Futuretext. ISBN: 978 0 955606953

Aitamurto, Tanja; **Aymerich-Franch, Laura**; **Saldivar, Jorge**; **Kircos, Catherine**; **Sadeghi, Yasamin**; **Sakshuwong, Sukolsak** (2020). "Examining augmented reality in journalism: Presence, knowledge gain, and perceived visual authenticity". *New media & society*, online first.
https://doi.org/10.1177/1461444820951925

Anderson, Chris (2006). *The long tail: Why the future of business is selling less of more*. New York: Hyperion. ISBN: 978 1 4013 0966 4

Anderson, Chris (2009). *Free: the future of a radical price*. London: Random House Business Books. ISBN: 978 1 401322908

Andrade, Alice-Oliveira; **Silva, Ana-Carmem**; **Nobre, Itamar-de-Morais** (2015). "O uso de smartphones na fotografia jornalística em Natal (Rio Grande do Norte / Brasil)". En: Canavilhas, João; Satuf, Ivan. *Jornalismo para dispositivos m*óveis: produção, distribuição e consumo, Covilhã: Livros Labcom, pp. 179-198. ISBN: 978 989 654 230 6

Barbosa, Suzana (2013). "Jornalismo convergente e continuum multimídia na quinta geração do jornalismo nas redes digitais". In: Canavilhas, João (org.). *Notícias em mobilidade. Jornalismo na era dos dispositivos móveis.* Covilhã: Livros Labcom, pp. 33-54. ISBN: 978 989 654 102 6

Bernal, Ana-Isabel (2009). *Los nuevos medios de comunicación y los jóvenes. Aproximación a un modelo ideal de medio*. Bruselas: Euroeditions. ISBN: 978 84 93691530

Bivens, Rena-Kim (2008). "The internet, mobile phones and blogging: How new media are transforming traditional journalism". *Journalism practice*, v. 2, n. 1, pp. 113-129.
https://doi.org/10.1080/17512780701768568

Blankenship, Justin C. (2016). "Losing their 'mojo'?". *Journalism practice*, v. 10, n. 8, pp. 1055-1071.
https://doi.org/10.1080/17512786.2015.1063080

Bowman, Shayne; **Willis, Chris** (2003). *We media - How audiences are shaping the future of news and information*. The Media Center at the American Press Institute.
http://www.hypergene.net/wemedia/download/we_media.pdf

Bradshaw, Paul (2014). "Instantaneidade: Efeito da rede, jornalistas mobile, consumidores ligados e o impacto no consumo, produção e distribuição". In: Canavilhas, João (org.). *Webjornalismo: 7 caraterísticas que marcam a diferença*. Covilhã: Livros LabCom, pp. 111-136. ISBN: 978 989 654 144 6

Brites, Maria-José (2010). "Jovens (15-18 anos) e informação noticiosa: a importância dos capitais cultural e tecnológico". *Estudos em comunicação*, v. 8, pp.169-192.
http://www.ec.ubi.pt/ec/08/pdf/EC08-2010Dez-10.pdf

Bruns, Axel (2008). *Blogs, Wikipedia, Second Life and beyond: From production to produsage*. New York: Peter Lang. ISBN: 978 0 820488677

Bui, Matthew N.; **Moran, Rachel E.** (2020). "Making the 21st century mobile journalist: Examining definitions and conceptualizations of mobility and mobile journalism within journalism education". *Digital journalism*, v. 8, n. 1, pp. 145-163.
https://doi.org/10.1080/21670811.2019.1664926

Canavilhas, João (2011). "El nuevo ecosistema mediático". *Index comunicación*, v. 1, n. 1, pp. 13-24.
https://journals.sfu.ca/indexcomunicacion/index.php/indexcomunicacion/article/view/4

Canavilhas, João (2013). "Contenidos periodísticos en el ecosistema líquido: Entre la convergencia y la divergencia". In: Irigaray, Fernando; Ceballos, Dardo; Manna, Matias. *Webperiodismo en un ecosistema líquido*. Rosario: Laborde Libros Editor, pp. 9-24. ISBN: 978 987 677 045 3

Canavilhas, João (2015). "Nuevos medios, nuevo ecosistema". *El profesional de la información*, v. 24, n. 4, pp. 357-362.
https://doi.org/10.3145/epi.2015.jul.01

Canavilhas, João; **Pellanda, Eduardo**; **Piñeiro-Naval, Valeriano**; **Nunes, Ana-Cecilia B.** (2020). "Mobile phones in young people everyday life: case study with Portuguese and Brazilian students". *Revista Famecos*, v. 27, pp. 1-23.
https://doi.org/10.15448/1980-3729.2020.1.35850

Canavilhas, João; **Satuf, Ivan** (2016). "Who brings the news? Exploring the aggregators apps for mobile devices". In: Aguado, Juan-Miguel; Feijóo, Claudio; Martínez, Inmaculada J. (eds.). *Emerging perspectives on the mobile content evolution*. IGI Global, pp. 223-241. ISBN: 978 1 46 668 838 4
http://doi.org/10.4018/978-1-4666-8838-4.ch012

Canavilhas, João; **Satuf, Ivan**; **Baccin, Alciane** (2016). "El futuro del periodismo está en el ecosistema móvil". En: Sánchez-Gonzales Hada M. (coord.), *Nuevos retos para el periodista innovación, creación y emprendimiento*. Valencia: Tirant Humanidades. ISBN: 978 84 1655 615 1

Canavilhas, João; **Satuf, Ivan**; **Luna, Diógenes**; **Torres, Vitor** (2014). "Jornalistas e tecnoatores: dois mundos, duas culturas, um objetivo". *Revista esferas*, n. 5, pp. 85-95.
https://portalrevistas.ucb.br/index.php/esf/article/view/5690

Casero-Ripollés, Andreu (2010). "Prensa en internet: nuevos modelos de negocio en el escenario de la convergencia". *El profesional de la información*, v. 19, n. 6, pp. 595-601.
https://doi.org/10.3145/epi.2010.nov05

Casero-Ripollés, Andreu (2012). "Más allá de los diarios: el consumo de noticias de los jóvenes en la era digital". *Comunicar*, n. 39, pp. 151-158.
https://doi.org/10.3916/C39-2012-03-05

Casero-Ripollés, Andreu; **Izquierdo-Castillo, Jessica** (2013). "Between decline and a new business model: the case of the Spanish newspaper industry". *Journal of media business studies*, v. 10, 1, pp. 63-78.
https://doi.org/10.1080/16522354.2013.11073560

Castellet, Andreu; **Feijóo, Claudio** (2013). "Los actores en el ecosistema móvil". En: Aguado, Juan-Miguel; Feijóo, Claudio; Martínez, Inmaculada J. (coords.). *La comunicación móvil: Hacia un nuevo ecosistema digital*. Barcelona: Editorial Gedisa, pp. 27-56. ISBN: 978 84 9784 782 7

Cevallos, María-del-Carmen (2009). *Jóvenes y celulares: las razones de su uso y abuso*.
https://bit.ly/2KTVfJs

Colussi, Juliana; **Assunção-Reis, Thays** (2020). "Immersive journalism: a narrative analysis in virtual reality apps". *Revista latina de comunicación social*, n. 77, pp. 19-32.
https://www.doi.org/10.4185/RLCS-2020-1447

Costera-Meijer, Irene (2007). "The paradox of popularity: How young people experience the news". *Journalism studies*, v. 8, n. 1, pp. 96-116.
https://doi.org/10.1080/14616700601056874

Courtois, Cédric; **Verdegem, Pieter**; **De-Marez, Lieven** (2013). "The triple articulation of media technologies in audiovisual media consumption". *Television & new media*, v. 14, n. 5, pp. 421-439.
https://doi.org/10.1177/1527476412439106

Dancy, Jonathan (1985). *Epistemologia contemporânea*. Lisboa: Edições 70. ISBN: 978 9724408118

Da-Silva, Fernando-Firmino (2014). "Smartphones e tablets na produção jornalística". *Âncora*, v. 1, n. 1, pp. 23-40.
https://periodicos.ufpb.br/ojs2/index.php/ancora/article/view/22735

Da-Silva, Fernando-Firmino (2015). *Jornalismo móvel*. Salvador: Edufba. ISBN: 978 85 232 1378 7

De-la-Peña, Nonny; **Weil, Peggy**; **Llobera, Joan**; **Giannopoulos, Elias**; **Pomés, Ausiàs**; **Spanlang, Bernhard**; **Friedman, Doron**; **Sánchez-Vives, Maria V.**; **Slater, Mel** (2010). "Immersive journalism: immersive virtual reality for the first-person experience of news". *Presence: Teleoperators and virtual environments*, v. 19, n. 4, pp. 291-301.
https://doi.org/10.1162/PRES_a_00005

Dimmick, John W.; **Powers, Angela**; **Mwangi, Sam**; **Stoycheff, Elisabeth** (2011). "The fragmenting mass media marketplace". In: Lowrey, Wilson; Gade, Peter J. (eds.). *Changing the news. The forces shaping journalism in uncertain times* London, UK: Routledge, pp. 177-192. ISBN: 978 0 415871570

Dimmick, John W.; **Sikand, Jaspreet**; **Patterson, Scott J.** (1994). "The gratifications of the household telephone: Sociability, instrumentality and reassurance". *Communication research*, v. 21, n. 5, pp. 643-663.
https://doi.org/10.1177/009365094021005005

Domingo, David (2011). "Managing audience participation. Practices, workflows and strategies". In: Singer, Jane B.; Domingo, David; Heinonen, Ari; Hermida, Alfred; Paulussen, Steve; Quandt, Thorsten; Reich, Zvi; Vujnovic, Marina. *Participatory journalism: Guarding open gates at online newspapers*. New York: Wiley-Blackwell, pp. 76-95. ISBN: 978 1 444 33226 1

Domínguez-Martín, Eva (2015). "Periodismo inmersivo o cómo la realidad virtual y el videojuego influyen en la interfaz e interactividad del relato de actualidad". *El profesional de la información*, v. 24, n. 4, pp. 413-423.
https://doi.org/10.3145/epi.2015.jul.08

Ekström, Mats; **Westlund, Oscar** (2019). *Epistemology and journalism*. Oxford research encyclopedia, communication.
https://doi.org/10.1093/acrefore/9780190228613.013.806

Fidalgo, António; **Canavilhas, João** (2009). "Todos os jornais no bolso: Pensando o jornalismo na era do celular". In: Rodrigues, Carla (org.). *Jornalismo on-line: modos de fazer*. Porto Alegre: Editora Sulina, pp. 96-146. ISBN: 978 8520505397

Fortunati, Leopoldina; **O'Sullivan, John** (2020). "Understanding mobile news: looking beyond the lockscreen". *Digital journalism*, v. 8, n. 1, pp. 164-169.
https://doi.org/10.1080/21670811.2019.1709522

Gant, Diana; **Kiesler, Sara** (2001). "Blurring the boundaries: Cell phones, mobility, and the line between work and personal life". In: Brown, Barry; Green, Nicola; Harper, Richard (eds.), *Wireless world: Social and interactional aspects of the mobile age*. London, UK: Springer-Verlag, pp. 121-131. ISBN: 978 1 4471 0665 4

Germen, Murat (2014). "The unstoppable rise of mobile imaging and aesthetics". *Proceedings of the EVA London 2014 on Electronic visualisation and the arts*.
https://dl.acm.org/doi/10.14236/ewic/eva2014.35

Geser, Hans (2004). *Towards a sociological theory of the mobile phone*. Sociological Institute. University of Zurich.
http://socio.ch/mobile/t_geser1.pdf

Gillmor, Dan (2006). *We the media: Grassroots journalism by the people, for the people*. Sebastopol: O'Reilly Media. ISBN: 978 0 596102272

Glaser, Mark (2004). "Collaborative conundrum: Do wikis have a place in the newsroom?". In: *Online journalism review*, Sept.
http://www.ojr.org/ojr/glaser/1094678265.php

Goeldi, Andreas (2018). *The smartphone revolution: Why the app store was more important than the iPhone*. Innospective. *https://bit.ly/3lIBu4c*

Goggin, Gerard; **Hjorth, Larissa** (2009). "The question of mobile media". In: Goggin, Gerad; Hjorth, Larissa (eds.). *Mobile technologies: From telecommunications to media*. New York, NY: Routledge, pp. 3-8. ISBN: 978 0 415878432

Gómez-Barroso, José-Luis (2018). "Uso y valor de la información personal: un escenario en evolución". *El profesional de la información*, v. 27, n. 1, pp. 5-18.
https://doi.org/10.3145/epi.2018.ene.01

Gong, Jun; **Tarasewich, Peter** (2004). "Guidelines for handheld mobile device interface design". *Proceedings of the 2004 DSI annual meeting*, pp. 3751-3756.

Grau, Oliver (2007). *Arte virtual: da ilusão à imersão*. São Paulo: Editora Sena. ISBN: 978 8573595321

Guerrero-García, Virginia; **Palomo, Bella** (2015). "The crisis of photojournalism: rethinking the profession in a participatory media ecosystem". *Communication & society*, v. 28, n. 4, pp. 33-48.
https://doi.org/10.15581/003.28.4.33-48

Harcup, Tony (2004). *Journalism principles and practice*. London: Sage. ISBN: 978 1 847872500

Harré, Rom (1984). *As filosofias da ciência*. Lisboa: Edições 70.

Henshaw, John M. (2006). *Does measurement measure up?: How numbers reveal and conceal the truth*. Baltimore: John Hopkins University Press. ISBN: 978 0 801883750

Hermida, Alfred; **Thurman, Neil** (2008). "A clash of cultures: The integration of user-generated content within professional journalistic frameworks at British newspapers websites". *Journalism practice*, v. 2, n. 3, pp. 343- 356.
https://doi.org/10.1080/17512780802054538

Huang, Edgar (2009). "The causes of youth's low news consumption and strategies for making youths happy news consumers". *Convergence*, v. 15, n. 1, pp. 105-122.
https://doi.org/10.1177/1354856508097021

Jarvis, Jeff (2009). *What would Google do?*. New York: Haper Collins. ISBN: 978 0 061719912

Jenkins, Henry (2008). *Convergence culture. La cultura de la convergencia de los medios de comunicación*. Barcelona: Paidós. ISBN: 978 84 49321535

Jensen, Klaus-Bruhn (2013). "What's mobile in mobile communication?". *Mobile media & communication*, v. 1, n. 1, pp. 26-31.
https://doi.org/10.1177/2050157912459493

Johnston, Jane; **Forde, Susan** (2017). "Churnalism". *Digital journalism*, v. 5, n. 8, pp. 943-946.
https://doi.org/10.1080/21670811.2017.1355026

Jukes, Stephen (2013). "A perfect storm". In: Fowler-Watt, Karen; Allan, Stuart (eds.), *Journalism: new challenges*. Centre for Journalism & Communication Research, Bournemouth University, pp. 1-18. ISBN: 978 1 910042 01 4

Katz, James E.; **Aarhus, Mark** (2002). *Perpetual contact: Mobile communication, private talk, public performance.* Cambridge. Cambridge University Press. ISBN: 978 0 511489471
https://doi.org/10.1017/CBO9780511489471

Kischinhevsky, Marcelo (2009). "Cultura da portabilidade. Novos usos do rádio e sociabilidades em mídia sonora". *Observatorio (OBS*) Journal*, n. 8, pp. 223-238.
http://obs.obercom.pt/index.php/obs/article/viewArticle/271

Klemens, Guy (2010). *The cellphone: The history and technology of the gadget that changed the world*. Jefferson McFarland. ISBN: 978 0 786458677

Kovach, Bill; **Rosenstiel, Tom** (2014). *The elements of journalism*. New York: Three Rivers Press ISBN: 978 0 307346704

Lasen, Amparo (2001). *The social shaping of fixed and mobile networks: A historical comparison*. Digital World Research Centre, University of Surrey.
http://www.kiwanja.net/database/document/report_mobile_history.pdf

Lauf, Edmund (2001). "Research note: The vanishing young reader. Sociodemographic determinants of newspaper use as a source of political information in Europe, 1980-1998". *European journal of communication*, v. 16, n. 2, pp. 233-243.
https://doi.org/10.1177/0267323101016002005

Ling, Rich (1997). "One can talk about common manners! The use of mobile telephones in inappropriate situations". In: Haddon, Leslie, *Themes in mobile telephony final report of the COST 248 home and work group*.
https://bit.ly/2VzvvEi

Linger, Richard C. (2002). “Chicas adolescentes y jóvenes adultos varones: dos subculturas del teléfono móvil”. *Estudios de juventud*, n. 57/02, pp. 33-46.

López-García, Xosé; **Silva-Rodríguez, Alba**; **Direito-Rebollal, Sabela**; **Vázquez-Herrero, Jorge** (2020). “From meta-journalism and post-journalism to total journalism”. In: Vázquez-Herrero, Jorge; Direito-Rebollal, Sabela; Silva-Rodríguez, Alba; López-García Xosé (eds.). *Journalistic metamorphosis, studies in big data 70*. Cham: Springer, pp. 199-207. ISBN: 978 3 030 36314 7
https://doi.org/10.1007/978-3-030-36315-4_15

Lorente, Santiago (2002). “Juventud y teléfonos móviles. Algo más que una moda”. *Estudios de juventud*, n. 57/02, pp. 9-24.

Maccise, Diana-Larrea; **Marai, Montaser** (2017). *Mobile journalism*. Doha: Al Jazeera Media Training and Development Centre.
https://institute.aljazeera.net/sites/default/files/2018/mobile%20journalisn%20english.pdf

Madianou, Mirca; **Miller, Daniel** (2013). “Polymedia: Towards a new theory of digital media in interpersonal communication”. *International journal of cultural studies*, v. 16, n. 2, pp.169-187.
https://doi.org/10.1177/1367877912452486

McChesney, Robert W. (2013). *Digital Disconnect.* New York: The New Press. ISBN: 978 1 62097 031 7

McNair, Brian (1998). *The sociology of journalism*. Oxford: Oxford University Press. ISBN: 978 0 340706152

Meditsch, Eduardo (1997). “O jornalismo é uma forma de conhecimento?”. *Biblioteca on-line de ciências da comunicação*. Covilhã: Universidade da Beira Interior.
http://www.bocc.ubi.pt/pag/meditsch-eduardo-jornalismo-conhecimento.pdf

Meso-Ayerdi, Koldo (2005). “Periodismo ciudadano: voces paralelas a la profesión periodística”. *Chasqui*, n. 90, pp. 4-15.
https://revistachasqui.org/index.php/chasqui/article/view/234

Mielniczuk, Luciana (2013). “O celular afronta o jornalismo”. In: Barbosa, Suzana; Mielniczuk, Luciana (org.). *Jornalismo e tecnologias móveis*. Covilhã: Livros Labcom, pp. 113-126. ISBN: 978 989 654 101 9

Mills, John; **Egglestone Paul**; **Rashid**; **Omer**; **Väätäjä, Heli** (2012). “MoJo in action: The use of mobiles in conflict, community, and cross-platform journalism”. *Continuum*, v. 26, n. 5, pp. 669-683.
https://doi.org/10.1080/10304312.2012.706457

Molyneux, Logan (2018). “Mobile news consumption”. *Digital journalism*, v. 6, n. 5, pp. 634-650. *https://doi.org/10.1080/21670811.2017.1334567*

Moretzsohn, Sylvia (2002). *Jornalismo em “tempo real”: O fetiche da velocidade*. Rio de Janeiro: Revan. ISBN: 978 8571062467

Nelson, Jacob L. (2019). “The persistence of the popular in mobile news consumption, digital journalism”. *Digital journalism*, v. 8, n. 1, pp. 1-16.
https://doi.org/10.1080/21670811.2019.1612766

Newman, Nic (2012). *Reuters Institute digital news report 2012: Tracking the future of news*. Reuters Institute for the Study of Journalism: University of Oxford.
http://media.digitalnewsreport.org/wp-content/uploads/2012/05/Reuters-Institute-Digital-News-Report-2012.pdf

Ortega-Gutiérrez, Félix; **Humanes, María-Luisa** (2000). *Algo más que periodistas: sociologia de una profesión*. Barcelona: Ariel. ISBN: 84 344 1814 2

Owen, Taylor; **Pitt, Ferguson**; **Aronson-Rath, Raney**; **Milward, James** (2015). *Virtual reality journalism*. Tow Center for Digital Journalism, Columbia Journalism School.
https://www.cjr.org/tow_center_reports/virtual_reality_journalism.php

Palacios, Marcos; **Barbosa, Suzana**; **Da-Silva, Fernando F.**; **Da-Cunha, Rodrigo** (2015). “Jornalismo móvel e inovações induzidas por affordances em narrativas para aplicativos em tablets e smartphones”. In: Canavilhas, João; Satuf, Ivan. *Jornalismo para Dispositivos Móveis: produção, distribuição e consumo*, Covilhã: Livros Labcom, pp. 7-42. ISBN: 978 989 654 230 6
http://labcom.ubi.pt/livro/137

Pariser, Eli (2011). *The filter bubble: What the Internet is hiding from you*. New York: Penguin Press. ISBN: 978 0 141969923

Park, Robert (2008). “A notícia como forma de conhecimento: um capítulo dentro da sociologia do conhecimento”. In: Berger, Christa; Marocco, Beatriz (org.). *A era glacial do jornalismo: teorias sociais da imprensa*, v. 2. Porto Alegre: Sulina, pp. 51-70. ISBN: 978 8520504413

Parry, Roger (2011). *The ascent of media: From Gilgamesh to Google via Gutenberg*. London: Nicholas Brealey Pub. ISBN: 978 1 857885705

Paty, Michel (1997). "A idéia da universalidade da ciência e sua crítica filosófica e histórica". *Discurso*, n. 28, pp. 7-60.
https://doi.org/10.11606/issn.2318-8863.discurso.1997.38018

Pauwels, Luc (2005). "Websites as visual and multimodal cultural expressions: opportunities and issues of online hybrid media research". *Media, culture & society*, v. 27, n. 4, pp. 604-613.
https://doi.org/10.1177/0163443705053979

Pauwels, Caroline; **Picone, Ike** (2012). "The tussle with trust: Trust in the news media ecology". *Computer law & security review*, v. 28, pp. 542-550.
https://doi.org/10.1016/j.clsr.2012.07.003

Pedrero-Esteban, Luis-Miguel; **Herrera-Damas, Susana** (2017). "La notificación push como estrategia informativa de la radio en el entorno digital". *El profesional de la información*, v. 26, n. 6, pp. 1100-1107.
https://doi.org/10.3145/epi.2017.nov.09

Pellanda, Eduardo-Campos (2009). "Comunicação móvel: das potencialidades aos usos e aplicações". *Em questão*, v. 15, n. 1, pp. 89-98.
https://seer.ufrgs.br/EmQuestao/article/view/6478

Perreault, Gregory; **Stanfield, Kellie** (2019). "Mobile journalism as lifestyle journalism?" *Journalism practice*, v. 13, n. 3, pp. 331-348.
https://doi.org/10.1080/17512786.2018.1424021

Peters, Chris (2012). "Journalism to go: The changing spaces of news consumption". *Journalism studies*, v. 13, n. 5-6, pp. 695-705.
https://doi.org/10.1080/1461670X.2012.662405

Peters, Chris; **Broersma, Marcel** (eds.) (2013). *Rethinking journalism: trust and participation in a transformed news landscape*. New York: Routledge. ISBN: 978 0 415 69701 9

Picard, Robert (2013). *Criação de valor e o futuro das organizações jornalísticas*. Porto: Editora Media XXI. ISBN: 978 989 7290725

Podger, Corinne (2018). *Mobile journalism manual: the guide for reporters and newsrooms*. Berlin: Konrad Adenauer Stiftung.
https://www.mojo-manual.org

Postman, Neil (1979). *Teaching as a conserving activity*. New York: Delacorte Press. ISBN: 978 0 440086512

Quinn, Sally; **Oldmeadow, Julian** (2013). "The Martini effect and social networking sites: Early adolescents, mobile social networking and connectedness to friends". *Mobile media & communication*, v. 1, n. 2, pp. 237-247.
https://doi.org/10.1177/2050157912474812

Raeymaeckers, Karin (2004). "Newspapers editors in search of young readers: Content and layout strategies to win new readers". *Journalism studies*, v. 5, n. 2, pp. 221-232.
https://doi.org/10.1080/1461670042000211195

Renó, Denis-Porto (2011). "Jornalismo de bolso: A produção de notícias para a blogosfera a partir de telefones móveis". *TecCom studies*, v. 1, n. 2, pp. 3-9.
http://www.teccomstudies.com/index.php?journal=teccomstudies&page=article&op=view&path%5B%5D=122&path%5B%5D=103

Richter, Felix (2019). "Have we passed the peak of the smartphone era?". *Statista*, 14 Febr.
https://www.statista.com/chart/12798/global-smartphone-shipments

Rosen, Jay (2006). "The people formerly known as the audience". *Press think*, 27 June.
http://archive.pressthink.org/2006/06/27/ppl_frmr.html

Saad, Beth (2011). "Estratégias de conteúdo para meios digitais". In: Quadros, Claudia; Caetano, Kati; Larangeira, Álvaro (orgs.). *Jornalismo e convergência: ensino e práticas profissionais.* Covilhã: Livros LabCom, pp. 43-65. ISBN: 978 989 654 063 0

Salaverría, Ramón (2014). "Multimedialidade: informar para cinco sentidos". In: Canavilhas, João (org.). *Webjornalismo: 7 caraterísticas que marcam a diferença*. Covilhã: Livros LabCom, pp. 25-52. ISBN: 978 989 654 144 6

Salaverría, Ramón (2019). "Digital journalism: 25 years of research. Review article". *El profesional de la información*, v. 28, n. 1, e280101.
https://doi.org/10.3145/epi.2019.ene.01

Santaella, Lucia (2007). *Linguagens líquidas na era da mobilidade*. São Paulo: Paulus.
https://ria.ufrn.br/jspui/handle/123456789/1037

Sasseen, Jane; **Olmstead, Kenny**; **Mitchell, Amy** (2013). "Digital: As mobile grows rapidly, the pressures on news intensify". *The state of the news media 2013*. The Pew Research Center's project for excellence in news journalism.
https://www.pewresearch.org/topics/state-of-the-news-media

Schneider, Henrik (2007). "The reporting mobile - A new platform for citizen media". In: Nyíri, Kristóf (org.). *Mobile studies - paradigms and perspectives*. Wien: Passagen Verlag, pp. 159-167. ISBN: 978 3 851658033

Scoble, Robert; **Israel, Shel** (2013). *Age of context: mobile sensors, data and the future of privacy*. Patrick Brewster Press. ISBN: 978 1 492348436

Scolari, Carlos A. (2008). *Las leyes de la interfaz: diseño, ecología, evolución, tecnología.* Barcelona: Gedisa. ISBN: 978 84 16919 93 2

Schmitz-Weiss, Amy (2015) "Place-based knowledge in the twenty-first century". *Digital journalism*, v. 3, n. 1, pp. 116-131.
https://doi.org/10.1080/21670811.2014.928107

Silva-Rodríguez, Alba (2013). "Los cibermedios y los móviles: una relación de desconfianza". *Icono14*, v. 11, n. 2, pp. 183- 207.
https://doi.org/10.7195/ri14.v11i2.586

Steensen, Stenn; **Westlund, Oscar** (2020). *What is digital journalism studies*. London: Routledge. ISBN: 978 94 29259555
https://doi.org/10.4324/9780429259555

Steven, Jane (2002). "Backpack journalism is here to stay". *Online journalism review*, 2 April.
https://bit.ly/2L06G2g

Strong, Catherine R.; **Zafra, Norman** (2016). "Natural disaster strategic communication: Drone, data and backpack journalism trends". *PRism*, v. 13, n. 1.
https://www.prismjournal.org/uploads/1/2/5/6/125661607/v13-no1-a5.pdf

Struckmann, Samson; **Karnowski, Veronika** (2016). "News consumption in a changing media ecology: An MESM-study on mobile news". *Telematics and informatics*, v. 33, n. 2, pp. 309-319.
https://doi.org/10.1016/j.tele.2015.08.012

Tambosi, Orlando (2003). "Elementos para uma epistemologia do jornalismo". *Intercom. Revista brasileira de ciências de comunicação*, v. XXVI, n. 2, pp. 40-52.
https://doi.org/10.1590/rbcc.v26i2.1044

Tracy, Marc (2020). "Digital revenue exceeds print for 1st time for New York Times Company". *The New York Times*, 5 August.
https://nyti.ms/2VE5ELq

Túñez, Miguel (2009). "Jóvenes y prensa en papel en la era de Internet. Estudio de hábitos de lectura, criterios de jerarquía de noticias, satisfacción con los contenidos informativos y ausencias temáticas". *Estudios sobre el mensaje periodístico*, v. 15, pp. 503-524.
https://revistas.ucm.es/index.php/ESMP/article/view/ESMP0909110503A

Twist, Jo (2005). "Mobiles capture blast aftermath". *BBC News*, 8 July.
http://news.bbc.co.uk/2/hi/4663561.stm

Usher, Nikki (2018). "Breaking news production processes in US metropolitan newspapers: Immediacy and journalistic authority". *Journalism*, v. 19, n. 1, pp. 21-36.
https://doi.org/10.1177/1464884916689151

Van-Damme, Kristin; **Courtois, Cédric**; **Verbrugge, Karel**; **De-Marez, Lieven** (2015). "What's APPening to news? A mixed-method audience centred study on mobile news consumption". *Mobile media & communication*, v. 3, n. 2, pp. 196-213.
https://doi.org/10.1177/2050157914557691

Walker, Mason (2019). "Americans favor mobile devices over desktops and laptops for getting news". *Pew Research Center*, 19 Nov.
https://pewrsr.ch/3qsBtF7

Westlund, Oscar (2008). "From mobile phone to mobile device: News consumption on the go". *Canadian journal of communication*, v. 33, n. 3, pp. 443-463.
https://doi.org/10.22230/cjc.2008v33n3a2004

Westlund, Oscar (2012). "Producer-centric vs. participation-centric: On the shaping of mobile media". *Northern lights*, v. 10, n. 1, pp. 107-121.
https://doi.org/10.1386/nl.10.107_1

Westlund, Oscar (2013). "Mobile news: A review and model of journalism in an age of mobile media". *Digital journalism*, v. 1, n. 1, pp. 6-26.
https://doi.org/10.1080/21670811.2012.740273

Westlund, Oscar; **Färdigh, A. Mathias** (2011). "Displacing and complementing effects of news sites on newspapers 1998-2009". *International journal on media management*, v. 13, n. 3, pp. 177-194.
https://doi.org/10.1080/14241277.2011.595020

Wheatley, Dawn; **Ferrer-Conill, Raul** (2020). "The temporal nature of mobile push notification alerts: A study of European news outlets' dissemination patterns". *Digital journalism*, ahead-of-print.
https://doi.org/10.1080/21670811.2020.1799425

Wolf, Cornelia; **Hohlfeld, Ralf** (2012) "Revolution in journalism? Mobile devices as a new means of publishing". In: Matin, Corinne; Von-Pape, Thilo (eds.). *Images in mobile communication*. Springer, pp. 81-99. ISBN: 978 3 531 93190 6

Zelizer, Barbie (1995). "Text, talk, and journalistic quoting practices". *The communication review*, v. 1, n. 1, pp. 33-51.
https://doi.org/10.1080/10714429509388250

Zelizer, Barbie (2019). "Why journalism is about more than digital technology". *Digital journalism*, v. 7, n. 3, pp. 343-335.
https://doi.org/10.1080/21670811.2019.1571932

Communication studies about sex: Implications for relationships, health, culture, and identity. A review

Jimmie Manning

Nota: Este artículo se puede leer en español en:
http://www.profesionaldelainformacion.com/contenidos/2021/ene/manning_espanol.pdf

How to cite this article:

Manning, Jimmie (2021). "Communication studies about sex: Implications for relationships, health, culture, and identity. A review". *Profesional de la información*, v. 30, n. 1, e300114.

https://doi.org/10.3145/epi.2021.ene.14

Invited manuscript received on February, 2nd 2020

Jimmie Manning
https://orcid.org/0000-0002-3572-8005

University of Nevada
School of Social Research & Justice Studies
Communication Studies - Mail Stop 0229
1664 N. Virginia Ave.
Reno, NV 89577 USA
jimmiem@unr.edu

Abstract

This article features a review of communication scholarship about sex from the past two decades (2000-2020). A typographic analysis of relevant research reveals 11 primary topic areas related to how interpersonal sexual communication is commonly researched in communication studies. Six of these topic areas are relationship-oriented in nature: flirting and initiation; pleasure and desire; sexual expectations; relational and sexual satisfaction; communication after sex; and negative aspects of sex and sexuality. Three of the topics are health-oriented in nature: sex education, especially in consideration of how parent-child talk happens in families; negotiation of safe sex practices; and sexual dysfunction. Finally, two of the topics are cultural in nature: social factors and influences; and media influences and representations. Scholarship is also reviewed in terms of theoretical commitments, with most research following sociopsychological or critical traditions but with a noteworthy number also embracing sociocultural or biological paradigms. Based on these observations, five directions are offered for future research: supporting programs of interpersonal sex research; advancing and/or creating methods related to communication sex research; eliminating heteronormativity; considering the practical aspects of sex research; and, perhaps most importantly, theorizing sex as communication.

Keywords

Constitutive communication theory; Discourse; Family communication; Health communication; Heteronormativity; Interpersonal communication; Media studies; Methodology; Online sexuality; Practical theory; Queer theory; Sex as communication; Sex positivity; Sexuality; Typology development.

1. Introduction

Communication studies, as a field, appears to have a sex problem. Studies abound when it comes to sexual identities, mass-mediated/popular representations of sex and sexuality, and topics such as pornography; but when it comes to research about actually having sex as well as the talk that leads there, the scholarship is largely medical-oriented or largely based on cultural discourses (**Manning**, 2014b). That is, few people actually seem to be examining interpersonal aspects of sexuality and especially not the talk that might happen during sexual acts. To wit, in *The handbook of sexuality in close relationships* (**Harvey**; **Wenzel**; **Sprecher**, 2004), a cross-disciplinary resource exploring sexuality in relationships, communication topics can only be found on 20 of the 686 pages of the handbook. Although that number is quite small, it is still better than what is revealed when considering the subfield of interpersonal

> Few people actually seem to be examining interpersonal aspects of sexuality and especially not the talk that might happen during sexual acts

communication studies. Sex, sexuality, sexual identity, and any other ostensibly sex-oriented topic are missing from *The Sage Handbook of Interpersonal Communication* (**Knapp**; **Daly**, 2011).

As these facts suggest, sex is being omitted, underrepresented, or ignored in close relationship and interpersonal outlets. This ambivalence is in notable contrast to other areas of the communication discipline. As a number of scholars have recently noted (e.g., **Comella**; **Sender**, 2013; **Noland**, 2010), the field of communication is seeing an unparalleled uptick in the development of sex scholarship. Unfortunately, as scholars have also noted (e.g., **Adams**, 2011; **Manning**, 2013) and as lack of representation in disciplinary handbooks suggests, the area of interpersonal communication studies has been slow to join this movement. Given that interpersonal interaction and processes are central to many communication transactions, this particular lack of momentum regarding sexual communication research extends beyond one area of the discipline and has potential implications for other areas of communication studies. In this essay I point to four particular areas of knowledge that could benefit from more-substantial understandings of interpersonal communication about sex: relationships, health, culture, and identity.

To begin this exploration, I review recent research regarding what I call *interpersonal sexuality* and how that impacts *sexual communication*. Combined, these terms point to the topical area of *interpersonal sexual communication*, one that, based on the evidence presented in this article, is largely ignored. After unpacking these key terms and explaining my approach to a review of relevant literature from 2000-2020, I go in-depth into the literature to indicate what topical areas have been covered, what theoretical traditions have been embraced, and how those who study interpersonal sexual communication might move forward with their work.

In exploring past research and then bringing it together to consider larger understandings of where sexual communication research can move next, I take a constitutive interpersonal approach (**Manning**, 2014c). As scholars have noted, many times interpersonal communication studies are dominated by or limited to sociopsychological or cybernetic theoretical approaches. The implications of this limited theoretical range have an impact on method, meaning post-positive statistical studies often dominate interpersonal communication scholarship (**Braithwaite**; **Schrodt**; **Carr**, 2015). In response, I cast a wider net with this exploration to identify sexual interpersonal communication scholarship that might not always be viewed as traditional or even as being included in interpersonal communication studies.

"I point to four particular areas of knowledge that could benefit from more-substantial understandings of interpersonal communication about sex: relationships, health, culture, and identity"

1.1. Methods for the review

To begin this review, I searched for relevant and recent literature using the *Communication and Mass Media Complete* database. I entered several search strings in order to try and gain a large number of articles related to interpersonal sexual communication since the turn of the millennium (2000-2020). Terms used for the search include various combinations of either interpersonal, interaction, relational, or relationship combined with one or more of the following terms: sex, sexual, sexuality, sexual identity, sexual communication, sex talk, queer, sexual orientation, intercourse, intimacy, and/or sexual interaction. Because the word *sex* has different meanings in relation to research, many articles were returned in searches that had no ostensible relationship to sex (the act) but instead used sex or gender as a variable or demographic descriptor. Those articles were discarded. Following this purge, 349 articles remained. I also found reviews for seven books in these searches, and because two of them were specifically about sex and communication they were added to the reading list.

The resulting 351 resources were closely examined to determine if they were about interpersonal sexuality. To that end, and in line with my review goals, they had to meet three standards to remain.

- First, the work had to deal specifically with communication between two or more people that was about sex. This rule eliminated many studies that examined media effects (e.g., the cognitive or affective impacts a television program or movie had on viewers) as well as studies that made connections between non-communicative psychosocial characteristics and number of sexual partners (e.g., a count study that examines the number of people someone has had sexual intercourse with over a particular time period).
- Second, *sex*, for the purposes of this project, needed to be related to actual physical acts or potential actual physical acts. This resulted in the elimination of many studies that were more about sexual orientation or identity.
- Finally, the study had to contribute something novel about sex and communication. In other words, it was not enough for sex to be merely present in the study (e.g., age of first sex used to characterize a finding about relational communication); it also needed to be observed and theorized about, even if only in subtle or tangential ways. After applying these rules, 137 articles or books remained.

I then indexed the authors for each of these remaining works and searched for them using *Google Scholar*, *Academia.edu*, and *ResearchGate*. This process allowed me to see if other research by these authors was available that did not come up in the database search. Again, I applied the three standards of inclusion, and this resulted in 26 additional books or articles being added to the review. At this point, I considered the collection of scholarship a good corpus of research to consider current trends in the field. These 173 sources were then analyzed using typology development (also known as typographic analysis; see **Manning**; **Kunkel**, 2014b) to divide the work based on topic areas. This analysis quickly made it apparent that, in terms of communication research about interpersonal sex, works tended to either foreground a relationships-oriented perspective (both in the casual or more enduring relational sense; n=61) or a health-oriented perspective (n=76). A smaller number of these articles focused on some aspect of culture, including some traditional media studies (n=36).

> Post-positive statistical studies often dominate interpersonal communication scholarship

Notably, this approach was limited in that all articles and books collected for the data set were written in English; and, because "communication studies" as a discipline is more of a United States enterprise, the literature was also skewed toward U.S.-centric perspectives –although, notably, many studies did not indicate the origin of the participants. To help indicate geographical diversity, when studies indicated the nation of origin for participants that information is included in this review.

1.2. Reviewing sex and relationships in communication studies

In conducting the typographic analysis and reviewing the literature, it was apparent that some topical areas about relationships and communication were quite robust, whereas other topics were limited to one or two articles. As such, some topical areas were able to be divided into subtopics. Following **Stamp**'s (1999) rationale for examining interpersonal literature, I considered how I could "weave these threads together into a coherent tapestry" (p. 531) that considered the specifics of each study while pointing to topical patterns. Doing so allows sex researchers both to see what interpersonal sexual communication studies have to offer and where future research might be needed. Further, given that the articles about a given topic often reached across methodological and theoretical paradigms, I sought to treat these articles not only as information that could be combined and assessed, but also as a unit of discourse that constitutes part of a larger discourse that is the field of sexuality studies in communication. With that justification, I constructed a first guiding question for this review: What are the salient topics of interest in recent studies of interpersonal communication about relationships and sex?

A caveat here: I present all of these themes and sub-themes as part of this review, both as a way of "showing my work" but also so that those who are interested in a particular topic or concept can discover literature of interest. This portion of the review is less about theorizing and conceptualizing than it is presenting a record of the existing work as it currently stands. That, in turn, provides a sense of what the field looks like in terms of topical traction as well as the methods or approaches scholars are using to do studies of sexual interpersonal communication. To that end, it could be helpful to think of sections 2-4 of this paper as an annotated bibliography, of sorts, where readers can especially focus on the topics or concepts that are more relevant to their own work or that rouse personal interest.

Moving to a second guiding question, it was also apparent from reviewing the literature that interpersonal communication was being studied across many different communication traditions. As **Craig** (1999) notes, communication as a field often finds its greatest strengths when its various traditions can be explored together or side-by-side to create a constitutive view of a topic or phenomenon. In other words, considering similarities and differences across theoretical lenses provides a fuller, more nuanced sense of the topics being studied and theorized. Further, **Manning** (2014c) argues that researchers across different traditions in interpersonal communication studies need to acquaint themselves with each other's work to both inspire the work they do in their own paradigms as well as to expand the scope, generalizability, transferability, and/or practicality of interpersonal communication theory.

To help ensure that this review does not fall into the same silos that plague many other forms of interpersonal communication and communication studies in general, a second guiding question was developed: What is the metadiscursive theoretical vocabulary for studying sex and relationships in interpersonal communication studies? In answering this question, the fifth section of this article not only provides a good sense of the theoretical domains driving sexual interpersonal communication studies; but it provides a good metatheoretical vocabulary for discussing interpersonal sexuality research and its findings.

> Interpersonal communication is being studied across many different communication traditions

Finally, after considering the topical and theoretical and terrains that researchers have covered, it made sense to consider what turns or directions might be beneficial to future studies of interpersonal sexuality. That led to a third and final guiding question for this review: What future directions might be fruitful for expanding, refining, and utilizing studies of interpersonal sexuality related to relationships? To that end, the sixth and final section of this review offers a five-part agenda for sexual interpersonal communication research inspired by an evaluation of the content of the research articles and books used for this project.

2. A review of relationship-oriented research about sexual communication

In response to the first guiding question for this review, 6 topic areas primarily related to relationships were identified:

- flirting and initiation,
- pleasure and desire,
- sexual expectations,
- relational and sexual satisfaction,
- communication after sex, and
- negative relational topics.

Despite these types of studies being more prevalent in general interpersonal communication research, only 61 of 173 total studies about interpersonal sexual communication were sorted into this domain.

2.1. Flirting and sexual initiation

The most dominant topic area in terms of relational sexual communication is flirting and sexual initiation. This research was divided into two subtopical areas, one representing face-to-face contexts and another representing online interaction.

a) Flirting and initiation in face-to-face contexts

Studies exploring flirting dominate the interpersonal sexual communication literature. Indeed, one of the few programmatic research programs discovered in the entire review of the literature review focused on the relationships between flirting and sexual interest. Specifically, in one study, **Henningsen** (2004) found that women tended to see flirting as more related to relational initiation or having fun, whereas men were more likely to attribute it to being sexual. A follow-up study (**Henningsen**; **Henningsen**; **Valde**, 2006) again revealed that men and women interpret the same flirting interactions differently, with men seeing more cues as indicating sexual interest than did women. That study also indicates that men perceived the pursuit of sexual interaction as more appropriate behavior than did women. A third study (**Henningsen**; **Braz**; **Davies**, 2008) demonstrates that office workers are less likely to see flirting as motivated by relational or sexual intentions in comparison to college students. This particular study calls into question how much faith can be placed in many of the interpersonal sexuality studies reviewed for this project, as a large number of the articles reviewed for this project exclusively used college students for their participants.

> The most dominant topic area in terms of relational sexual communication is flirting and sexual initiation

A fourth study from Henningsen's line of flirting research (**Henningsen** *et al.*, 2009) explores verbal and nonverbal cues. Findings indicate that when verbal cues are used, both men and women are less likely to see a difference in sexual interest; whereas with nonverbal cues, men see more sexual interest in the communication than women. Finally, a meta-analysis of both flirting perceptions as well as perceptions of seductiveness and what the researchers label as "promiscuousness" was conducted to explore relationships between the three (**La-France**; **Henningsen**; **Oates**; **Shaw**, 2009). Results indicate positive and statistically significant weighted correlations between flirtatiousness, seductiveness, and promiscuousness both in terms of the sex of the person being observed as well as the mode of that observation (e.g., videotaped segment, photograph, etc.). Collectively, Henningsen's line of work, all conducted within the U.S., provides an indication of differences in how flirting cues are perceived by men and women. Aside from Henningsen's work, other studies have examined flirting using relational framing theory (**Hall**, 2015) and error management theory (**Hall**; **Xing**; **Brooks**, 2015), among others.

Beyond flirting, other studies more directly examine how sexual activity is initiated or the results of initiating such activity. For example, **Browning**, **Hatfield**, **Kessler**, and **Levine** (2000) examine four motives for initiating sex –love, pleasure, conformity, and recognition– and consider them in interaction with gender. They found that gender was the most important predictor of initiating usual sexual behavior, although love was the best predictor of actually engaging in sex regularly. Also related to gender, **Parker** and **Ivanov** (2013) found that younger women are especially likely to report that men are the initiators for sexual interaction. Turning to a study that features implications about how some gay, lesbian, and bisexual (GLB) people initiate sex, **Manning** (2015a), drawing from a multinational participant pool, found that some people come out, or reveal their sexual identity for the first time, by trying to initiate sexual activity with a person they also believe to be GLB. Still, the majority of research about flirting and sexual initiation features participants who are assumed to be heterosexual. Communication sex researchers should consider examining non-heterosexual participants as they develop future studies.

b) Online sexual partners

Other initiation studies focus on online sexual partners. For example, **Peter** and **Valkenburg** (2007) sought to understand what leads people to look for sex online. In their survey of 729 Dutch adults, they found support for the recreation hypothesis, or the idea that sensation seekers and sexually-permissive people will pursue people online via the anonymity of the Internet. In contrast, they were

> Henningsen provides an indication of differences in how flirting cues are perceived by men and women

unable to find support for the compensation hypothesis, or the idea that people with low physical self-esteem or who are high in dating anxiety use online mechanisms for what they cannot do offline. In a survey of 1,017 Latino men seeking men (MSM) from the U.S., **Ross**, **Rosser**, **McCurdy**, and **Feldman** (2007) asked open-ended questions about how men preferred to meet sex partners. They found three categories based on their coding: 48.4% declared "in real life" (IRL), 31.6% said online, and 20% indicated that "it depends" (**Ross** *et al.*, 2007, p. 159). For the "it depends" category, thematic analysis revealed time, setting, mood, alcohol, drugs, sexual needs, and relationship intentions were all salient considerations.

> Sexting allows a space for adults to engage in fantasies they would not embrace offline

Other studies reveal that sex is not limited to physical acts and can include rich forms of fantasy when it happens online. For example, a study with participants from the virtual world *Second Life* reports that they often engage in sexual activities there that they would not in the physical world (**Craft**, 2012). Further, participants pointed to the libratory

nature of *Second Life* and how it allowed them to engage in somewhat taboo sexual activities (e.g., anal sex, bondage) without social stigma. Similarly, **Manning** (2014b) found that sexting allows a space for adults to engage in fantasies they would not embrace offline. In another study of adult sexting practices, **Manning** (2013) conducted participant definitional analysis to learn that, based on how they talked about it, sexting was being constructed as

> "the willing interactive exchange of sexual-oriented messages using a digital mobile communications device" (p. 2510).

Based on this definition, he argues that when people discuss sexting it assumes that the sexual text messages were wanted; that the different types of messages viewed as being *sexual-oriented* can be wide-ranging and not always ostensibly about sex or sex acts; and that sexting is seen by those who participate in it as different from other forms of computer-mediated sexuality such as cybersex. Based on these results, he cautions online sex researchers to carefully consider the terms they use for representing participant behavior.

Even though sexting practices for adults did not seem problematic in the literature, **Curnutt** (2012) reviews several problems related to teen sexting and other forms of teen online sexual identity. Specifically, he argues that the ubiquity of social media have led to celebrities and teens using graphic sexual images (e.g., nudity, explicit sexual acts) in order to make up for what they see as undesirable qualities in themselves. He also questions whether sexting is more a way of reflecting on genuine sexual self or if it is a fast way to manage increased libidinal status. **Lunceford** (2011) also shares concerns about online adolescent sexuality, suggesting that laws have not caught up to teenage sexual behavior and that such behaviors must be considered to create fair and just laws. Another study of youths from across Europe (**Smahel**; **Wright**; **Cernikova**, 2014) indicates that they encounter many sexual problems online, including unwanted sexual requests and comments; sexual bullying; a pressure to publish sexual pictures to gain interest on social media sites; and revenge porn, the posting of personal sexual pictures or videos from an ex in order to evoke shame. Collectively, these adolescent-oriented studies suggest that only sexuality can be and often is more problematic for teenagers than it is for adults who face much less consequences.

Turning to another study of online adolescent sexual behaviors, **Baumgartner**, **Valkenburg**, and **Peter** (2010a) collected longitudinal data from 1,445 Dutch adolescents and learned that adolescents who engage online sexual behaviors perceive that more friends engage in such behavior; see less risks and more benefits to online sexual interaction; and feel less vulnerable about negative consequences. In a specific decision-making situation related to online sexual behavior, however, contextual factors –especially peer behavior– often resulted in a more-nuanced response from participants. Based on this finding, the researchers suggest more studies about peer influence regarding initiating and participating in sex online. In a different study, the same group of researchers (**Baumgartner**; **Valkenburg**; **Peter**, 2010b) compare the online sexual behaviors of adolescents and adults. Through a survey of 1,765 Dutch adolescents and 1,026 Dutch adults, they learned that adolescents are more at risk of encountering unwanted sexual solicitation online than adults, even if they did not engage in as much online sexual behavior. Again, a pattern of adults having less problems with online sexual interactions than youths emerges from the studies.

> Adolescents are more at risk of encountering unwanted sexual solicitation online than adults

Finally, it is important to note that some studies about online sexuality looked less at initiating sexual interaction or relationships and more at maintaining them. As one notable example, **Rubinsky** (2018) examines the face-saving elements of negotiating sexual practices online for those who practice bondage, domination, and sadomasochism (BDSM). Similar to the sexting studies presented earlier in this section, she presents compelling evidence that many negotiations of sexual interaction happen via multimodal communication, with some communication about sexual wants, desires, and needs happening face-to-face and others happening online.

2.2. Communicating pleasure and desire

Many studies reviewed for this project focus on the pleasure people receive related to sexual communication as well as participants' sexual desires. Because these two concepts were often connected in the research used for this review, they are explored together here. The most common exploration of sexual pleasure in relationships manifested in the form of research about friends with benefits relationships (FWBRs). As one instance, in an essay that defines and explains FWBRs, **Levine** and **Mongeau** (2011) establish that FWBR sexual interactions are not one-time instances, but rather involve repeated encounters between two people. This conceptualization draws from a previous study (**Bisson**; **Levine**, 2009) that indicates that even though FWBRs allow trust, comfort, and sexual affordances without romantic commitment, rules are often not negotiated explicitly. Another study indicates that in many instances FWBRs do represent either an attempt at or a desire to shift from friendships to romantic relationships (**Mongeau**; **Knight**; **Williams**; **Eden**; **Shaw**, 2013). That same study also reveals 7 types of FWBRs. Four of these types represent an attempt for friends to transition a relationship from friendship to romance: successful, failed, and unintentional transformational relationships as well as relationships where the friend were transitioning out of the relationship completely; with the other 3 types being true friends, those who are seeking opportunity from their friend network, and those who just want sex.

Other studies about pleasure and desire are less cohesively connected to each other, with many of these studies appearing to be one-off works from the researchers. For example, **Cowan** and **Horan** (2014) found that coworkers perceived colleagues hooking up in the workplace as being about sexual pleasure and not so much about romance; and, further, that such relationships were often looked at with some level of disdain. **Parker** and **Ivanov** (2013) indicate that many women report discussing sexual wants and needs as being awkward in their first sexual relationships, but as they continue to experience sexual relationships there is more comfort to express what they crave or desire in a sexual interaction. Turning to methodology, **Levine** (2003) argues that the paradoxical nature of desire is not captured well in statistical research studies, especially pointing to how desire itself is not always wanted.

> The paradoxical nature of desire is not captured well in statistical research studies, especially pointing to how desire itself is not always wanted

Still other studies connected sexual pleasure and desire to the spiritual. **Woodward**, **Findlay**, and **Moore** (2009) found in their study of 298 sexually active adults that about two-thirds of the participants had some sort of

> "mystical sexual or loving experiences, feelings of sexual 'oneness' with a partner, intense passion or intense feelings of closeness and belonging, and out of the ordinary positive feelings such as overwhelming joy or happiness" (p. 436).

Such sexual-spiritual connections include mystical sex, where partners felt as if they were melding into one; sexual ecstasy and joy; a special sexual experience (e.g., being in the right time in the right place with the right person); or a sense of closeness and belonging. **Lunceford** (2009) also explores spirituality and sexuality, asking philosophical questions about whether increased mediation (i.e., computer-mediated or mobile communication) reduces the sacred experiences mentioned in Christian texts about two bodies becoming one.

2.3. Communicating sexual expectations

Studies about what people expect in terms of their interpersonal sexual interactions fall into two categories: sexual script studies and studies about dating. In a study about sexual scripts, **La-France** (2010b) takes a robust body of research from the 1990s about how sexual interaction and activity are learned and updates it for more contemporary times. First, she points out that because sexual scripts often begin in a public location, that specific location type could provide context as to whether or not sex is likely to happen. Second, she notes that sexual scripts often end with the sexual encounter, and although that is pragmatic for research, she argues it limits analysis by not including interaction during or after sexual intercourse. Finally, even though participants in her study indicate that the traditional sexual script is still realistic, she also believes that new research could examine in-depth how sexual scripts might have changed over time. This study is exemplary in the way that it continues to build knowledge via continued development of an already-established interpersonal sexual communication concept. More recently, **La-France** (2020) has argued that researchers must also consider unscripted sexual interaction, as most of the extant literature focuses on scripted interaction.

Returning to script research, another group of researchers examined first date scripts to, in part, understand how sex was or was not a part of expectations. In a first study, **Morr** and **Mongeau** (2004) investigate how three factors –relationship type, sex of initiator, and alcohol consumption– play into sexual expectations for a first date. The participants, 218 college students, read the same hypothetical scenario that detailed a dating situation. The study's findings indicate men have higher expectations about sex than women, but that most people expect more intimate communication when close friends are on a date versus a date between two people who are less familiar. When alcohol was introduced in the study as being available on the date, participants had higher expectations that sex would occur.

However, a second study (**Mongeau**; **Morr-Serewicz**; **Ficara-Therrien**, 2004) reveals alcohol as unexpectedly unrelated to sexual goals. Because the second study dealt primarily with date goals and constructing a first date, it might be that alcohol is not used as part of the planning for a date in order to achieve those goals. A third study that also explores dating goals (**Mongeau**; **Jacobsen**; **Donnerstein**, 2007) reveals that while college students might have differences for first date goals based on their reported sex, non-college students did not. More to the point of this review, college men tended to indicate sexual goals for dating whereas college women were more interested in friendship, having fun, and moving date-to-date.

Emmers-Sommer and colleagues (2010) also conducted a dating study, this one with a specific focus on expectations about sex on a first date. Drawing from a pool of college participants, they found that men have higher first date sex expectations than women, especially when men pay for a date and the date occurs in an apartment (as opposed to a public place such as a movie theatre or restaurant). Interestingly, they also found that if a woman asked and paid for a date and the date happened in her apartment, then rape myth acceptance beliefs (i.e., the belief that rape is just a "myth" and does not tend to really happen) were higher for men in comparison to when men asked for and paid on the date or when either sex invited the other for the date and paid their own ways. Similar to the other dating studies, a focus on differences between men and women is in place –a recurring theme for research about interpersonal sexuality. Finally, other research –such as **Coffelt**'s (2018) study on sexual goals, plans, and actions– examines the sexual scripts employ to delay or abstain from or delay sexual intercourse. Many similar studies of this nature fell more into the domain of safe sex communication.

2.4. Communication as related to sexual and relational satisfaction

Other interpersonal sexual communication studies explore aspects of satisfaction. For example, **Coffelt** and **Hess** (2014) found in their study of 293 married people that a positive relationship exists between disclosing sexual information and both closeness and relationship satisfaction. Two other studies reviewed for this project offer new measures of sexual satisfaction. In the first, Štulhofer, **Buško**, and **Brouillard** (2010) develop and biculturally validate a new sexual satisfaction scale, one with a particular focus on multiple domains of pleasure and that includes communication items. In the second, **La-France** (2010a) pulls from two theoretical models to develop a combined model that uses sexual knowledge and sexual exchange variables to predict sexual satisfaction levels for individuals. Such development of scales or measures that explicitly and directly examine sexual communication are rare, based on this review, and researchers should continue to consider how they can develop similar tools.

> Sexual communication is especially important to sexual satisfaction

In other studies related to satisfaction, **Manning** (2014b) found that adult couples could reduce uncertainty about what their partners did and did not want in terms of sexual interaction as well as increase their sexual satisfaction and pleasure through their sexting practices. That, in turn, bolstered their reported relational satisfaction. In a review of sexual satisfaction literature, **Sprecher** and **Cate** (2004) illustrate that sexual communication is especially important to sexual satisfaction. Such communication includes how sex is initiated, accepted, and refused; disclosure of both likes and dislikes; and communication involved with resolving sexual conflict. **Theiss** and **Estlein** (2014) found that sex topic avoidance and indirect sexual communication were negatively association with sexual satisfaction for women, but only sexual topic avoidance was negatively related with sexual satisfaction for men. In another study that focused more directly on sexual conflict (**Rubinsky**, 2021), those who are in marginalized relationships reported several sources of sexual conflict in their relationships, including gender dysphoria or a history of intimate partner violence.

Finally, **Levine**, **Aune**, and **Park** (2006) offer a particularly well-designed, unique, and complex study examining how love styles, among other things, are related to interpersonal sexuality –specifically in terms of relational intensification strategies. According to the study, those favoring ludic (spontaneous and playful) or erotic (sexual) love styles have the most unique attributes related to sex and sexuality. A ludic love style is positively related to physical attractiveness and being good in bed, although it is negatively related to intelligence and a good personality. It is also positively related to nonverbal affection and sexual intimacy. An erotic love style is also positively correlated with physical attractiveness and being good in bed, but unlike ludics, those with an erotic style are positively related to relationship satisfaction and stability.

2.5. Communication after sex

In an original and highly productive line of research, Amanda Denes and colleagues explore the communication that happens after sexual activity, frequently referred to as pillow talk. In a first study, **Denes** (2012) found that disclosure of positive feelings for a partner after sex is associated with relationship satisfaction, closeness, and trust; and, further, that women who orgasmed disclosed more than both women who did not orgasm as well as men who did. Additionally, this study suggests people in monogamous/committed relationships experience more disclosures following sexual activity and more positive outcomes in comparison to people in casual relationships. A second study (**Denes**; **Afifi**, 2014) adds alcohol to the equation, revealing that the more alcohol is consumed by an individual, that person will assess fewer benefits related to disclosing. Alcohol consumption was also related to less positively-valenced and less-deep disclosures; and the communicated disclosures were more unintentional.

Denes's pillow talk research extends to several areas of exploration including deceptive affectionate messages (**Bennett**; **Denes**, 2019), as it relates to uncertainty following a relational transgression (**Denes**; **Crowley**; **Makos**; **Whitt**; **Graham**, 2018), relational maintenance strategies (**Denes**; **Dhillon**; **Speer**, 2017), and difficult couple conversations (**Denes**; **Crowley**; **Winkler**; **Dhillon**; **Ponivas**; **Bennett**, 2020), among other topics. This robust line of research has led to the development of a Post-Sex Disclosures Model (**Denes**, 2018) that examines the connections between orgasm, self-disclosure, and relational satisfaction. Denes's work serves as a prime example of how a research program can be used to develop theoretical approaches to interpersonal sexual communication.

> Disclosure of positive feelings for a partner after sex is associated with relationship satisfaction, closeness, and trust

Examining a completely different form of post-sex communication and from a more philosophical angle is **Lunceford** (2008), whose study of the "walk of shame" points to how people treat the post-sex, morning-after walk home as a form of spectatorship. He notes that the teasing and taunting that accompany the walk of shame is particularly unkind to women and reflects sexist attitudes regarding sexuality. Finally, in a study that looks beyond the immediate after-sex period and more into the results of sexual activity, **Manning** (2014b) points to dyadic relational turning point interviews with couples to illustrate how sometimes first sex is also the first relational turning point. That is, for many couples in his study the first time they had sex –often moments after meeting each other– was considered by them to be the beginning of their enduring romantic relationship. This finding disrupts the common narrative that sex comes later in a relationship.

> The lack of consent research is especially surprising given that consent is ostensibly communicative and has been the focus of many news stories in recent years

2.6. Negative aspects of relationship-oriented sex communication

I label the final relational category of interpersonal sexuality studies as the negative aspects of relationship-oriented sex communication. Although just about every interpersonal sexual communication topic has positive and negative aspects related to it, the topics listed here almost always deal with some sort of pain, aggression, and or psychological distress.

a) Sexual coercion

Few studies of sexual coercion were identified in the review; nor were there many interpersonal sexual communication studies about consent. The lack of consent research is especially surprising given that consent is ostensibly communicative and has been the focus of many news stories in recent years, especially in the U.S. In terms of consent topics related to interpersonal sexual communication, Kristen Jozkowski has developed a sophisticated and extended line of research that examines consent cues and how young adults decide whether or not a partner wants to have sex. Topics explored in her research program include competing definitions or understandings for what constitutes consent; cultural definitions of rape and consent; consensual unwanted sexual activity; and verbal consent cues, among others (for a complete overview see **Jozkowski**, 2016). The work she and her colleagues have conducted even calls into question such important aspects of consent such as how men and women see consent happening differently, including the locations/places and times where and when consent happens before sexual activity (e.g., **Jozkowski**; **Manning**; **Hunt**, 2018).

Other than Jozkowski's work, one other study examined the intersection of consent and ability. Specifically, **Mandarelli** *et al.* (2012) examined patients with either schizophrenic disorders or with bipolar disorder. Patients who were on the schizophrenic spectrum had a lower capacity to consent than did those with bipolar disorder. Poor cognitive functioning was associated with lower capacity to offer consent in both groups.

Moving more directly into the area of coercion, **Jones** and **Olderbak** (2014) found that men who scored higher in psychopathy and social dominance are willing to engage in coercive tactics for sex when presented with hypothetical scenarios that resulted in sexual rejection. Even if they did not score high in psychopathy and social dominance, men who scored high in narcissism were likely to engage in coaxing tactics to try and gain sexual compliance. In another study that connects to coercion, **Nyanzi**, **Nyanzi-Wakholi**, and **Kalina** (2009) frame cultural pressures for men to engage in risky sexual behaviors as a form of bullying that is dangerous to physical health and mental well-being. Again, the sexist and sometimes misogynistic expectations related to sexuality and culture are highlighted. **Denes** (2011) also embraced a critical approach in her study exploring the anonymously-authored book *The mystery method: How to get beautiful women into bed* where she describes how the book encourages men to see women's physiological responses as a problematic "truth" that they want sexual activity.

In terms of unwanted sex or sex-seeking attention, **Koelsch** (2014) examines the discrepancies between cultural discourses of sexual assault and the specific experiences of unwanted sexual relations as articulated by the women she interviewed. Her work indicates many women feel they do not have the agency to express their personal experiences on their own terms; and she suggests that sex not be labeled as either consensual or non-consensual, but that a continuum that uses "choice" and "force" be used. **Afifi** and **Lee** (2000) studied sexual resistance strategies, learning that identity/appearance goals strongly influence selection of strategies; concern for those goals diminish when a resistance plan fails; that the directness of a request might be limited immediately but becomes more relevant as resistance continues; and that more urgency is placed on women's sexual resistance responses than men's. Importantly, work has started to explore how women can be more assertive regarding sexual activity. For example, **Widman** and colleagues (2018) conducted a randomized controlled trial of an online program that helps adolescent girls to develop sexual assertiveness skills.

> Many women feel they do not have the agency to express their personal experiences on their own terms

b) Sexual harassment

Other studies examine unwanted sexual attention in the workplace. **Dougherty** *et al.* (2009) make an interesting contribution to sexual harassment literature, using a new theory of language convergence/meaning divergence to explain how different parties in an interaction can use the same language to mean different things. This research helps to explain disjunctive beliefs in the workplace about whether communication is flirting or sexual harassment. In a more personal study, **Johnson** (2014) shares her autoethnographic story of sexual discomfort when, as a dancer in a music video, she was sexually demeaned. She specifically addresses her limited agency in the situation and considers how sexual memories are authored.

c) Infidelity

Two studies had a primary focus on sexual infidelity and what it means to relationships. **Lunceford** (2013b) complicates notions of infidelity, pointing to how online sexual interaction has always raised questions about what does or does not constitute cheating; but then also points to how developments in technology, especially advances in online robots (bots) could allow for interesting new forms of online sexual interaction. **Donovan** and **Emmers-Sommer** (2012) explored attachment and perceptions of infidelity, and as they expected found that women had better responses to men to a sexual infidelity scenario. Specifically, women, more than men, were likely to engage in constructive, integrative, and active response strategies. In terms of emotional infidelity, however, men responded in a more positive manner and were more likely to engage loyalty and passive constructive relational repair than were women. These results reflect a cultural idea that for men sexual activity is not necessarily linked to emotion and that men are more disturbed by their partners having sex with another than they are that partner spending time with another.

> Reasons given for withholding past experiences: the past should be kept in the past; such information might threaten identity, especially if current lover is compared to past lovers; revealing such information threatens the relationship; and to avoid jealousy or embarrassment

Another study (**Miller**; **Denes**; **Diaz**; **Buck**, 2014) explored jealousy as it related to implied infidelity. The researchers found that hypothetical scenarios using online photos and vignettes generated significant emotional response; and increases of depiction of touch intimacy in photos caused these responses to heighten. Males also indicated more sexual arousal in response to seeing their partners interact with a friend, whereas females responded with fear, sadness, and envy.

d) Privacy and surveillance

Two studies feature negative aspects of privacy and interpersonal sexuality. First, **Anderson**, **Kunkel**, and **Dennis** (2011) investigated how couple members withhold information about past sexual experiences from each other. They learned that men and women displayed similar frequency in the four dominant rationales they offered for withholding such communication. The reasons include that the past should be kept in the past; that such talk might threaten identity, especially in how the current lover might be compared to past lovers; that revealing such information threatens the relationship; and to avoid emotions such as jealousy or embarrassment. Using a queer-theoretical approach, **Yep** (2003) focuses on how sexualities labeled as queer or deviant might be labeled as such because they threaten notions of a public-private sexuality. As he asserts when writing about sadomasochism,

> "By focusing on the entire surface of the body as a site of potential erotic pleasure, S/M practices challenge to dissolve the monopoly of genitally-focused sexuality –that is, penetrative sex encoded within the heterosexual matrix of meanings" (**Yep**, 2003, pp. 44-45).

In other words, he argues that reconceptualizing sexual activity threatens notions of what should or should not be exposed and what can be kept private. In response, cultures want people to hide non-normative sex.

In some instances, online communication can provide an outlet for sexual openness, and many times in positive ways. For example, **Yeo** and **Chu** (2017) offer an analysis of how Chinese college-aged students share "sex secrets" via a *Facebook* page. Their content analysis revealed that many participants in the group were seeking opinions or information (30.38%) as well as making requests for advice (13.68%). Most of the comments provided were supportive in nature (69.49%), allowing a space where sex could be openly discussed. Such positive research is in contrast to the findings of **Manning** and **Stern** (2018) who point to how sexuality is both shamed online and often surveilled. That is, as people continue to be more sexual online, they risk being watched by others who will take the resulting online sexual artifacts (e.g., nude photos shared with a partner, sex videos) and share them with others. Their *Theory of interpersonal panopticism* accounts for how sexual interaction is controlled by the fear of being watched.

e) Shaming

Some of the sex education-oriented articles also framed sexual behavior, especially unsafe or frequent behavior, as a negative topic. In a review of narrative ethics, **Adams** (2008) points to the dangers of presuming that gay men are sexually irresponsible, promiscuous, or HIV+. He also points to the flaws of taking sex research that was created for one specific purpose and using it for another, such as someone who might cite a study of bathhouse culture as an example of how gay culture is morally "dirty" (**Adams**, 2008, p. 183). Finally, research about memorable messages (**Gunning**; **Cooke-Jackson**; **Rubinsky**, 2019) reveals several ways women are shamed for their sexuality, ranging from having sex while on their period to the fears they might have about fertility.

3. A review of health-oriented research about sexual communication

Health topics presented here include research where interpersonal sexual communication is meaningfully addressed and studied/measured as part of the study but where the primary focus of the scholarship is on creating, maintaining, or preserving sexual health. Seventy-six of the 173 articles were sorted into these topic areas of sex education, sexual dysfunction, and negotiating safe sex practices.

3.1. Sex education

a) Sex education/talk about sex in families

The research corpus constituting the single-largest topic or subtopic in this study is sex education in families. Given that two state-of-the-art reviews have already covered the topic (see **Coffelt**; **Olson**, 2014; **Wright**, 2009), this finding is not surprising. Many of these studies focus on who is most likely to be part of conversations about sex, especially those that were educative in nature. For example, one study found mothers tend to offer more sex education, and when they do they tend to be more specific about the information they offer (**Angera**; **Brookins-Fisher**; **Inungu**, 2008). Another study indicates both mothers and fathers are likely to talk about sex with their sons, whereas mothers are more likely to talk with daughters (**Wyckoff** *et al.*, 2008). In **Raffaelli** and **Green**'s (2003) study of highly educated Latino young men and women, the young women reported more sexual communication with mothers than did the young men. They also reported sexual communication by young women was associated with non-Mexican origin. For those young women with older brothers in the home, there was also a negative association with sexual communication in the family. Finally, the study reveals more-educated mothers were more likely to talk with their sons about sex, with more-educated fathers likely to talk to both sons and daughters.

> Mothers tend to offer more sex education, and when they do they tend to be more specific about the information they offer

In his study of Israeli Jewish and Arab adolescents, **Hetsroni** (2008) found that the participants –similar to American teens in past studies– recognized television and peers as the most useful sources of information about sex. Parents were pointed to as less useful sexual information sources. In another study, **Sprecher**, **Harris**, and **Meyers** (2008) surveyed different groups of Midwestern college students on an annual basis for 17 years. They found students were turning to families on a consistent basis across the years; but that sources such as media, peers, and professionals were increasing in reliance as student sex education sources. A modest positive correlation linked higher social class index with a higher likelihood of American parents providing sex education; and, notably, Black participants reported significantly more sex education from parents in comparison with Whites and Latinos, with Latinos reporting the lowest amount of family sex education talk.

The prevalence of sex talk was also explored. **Heisler** (2005) found that most (77%) of the participants from her study of 176 American student-mother-father triads could recall conversations about sexuality. Still, another study reflected that children often do not feel as if their parents are willing or able to talk about sex (**Angera**; **Brookins-Fisher**; **Inungu**, 2008). Some of the studies identified why sex talk is or is not happening. One of those studies found children who perceived their parents as having communication competence tended to be less avoidant about sex talk (**Afifi**; **Joseph**; **Aldeis**, 2008). Further, that study also suggested parents who were informal, receptive, and composed during conversations about sex had adolescents who reported being less avoidant and less anxious. The quality of the relationship was also an influential factor as to whether a child was anxious or avoidant during sex conversations.

Other studies examined parent openness during talk about sex. **Kirkman**, **Rosenthal**, and **Feldman** (2005) unpacked the complex meanings Australian parents held about being open with their children about sexuality. For those parents, openness included being willing to answer questions, even if they did not always maintain a spotlight on a question topic; being open-minded about what their children wanted to discuss; maintaining a sense of privacy boundaries; and taking a specific child's characteristics into consideration. Similarly, **Coffelt** (2010) found evidence that even if parents felt they could talk openly about sex because it is a natural topic, they also realized that some conversations could lead to challenges –especially depending on content. In a study drawing from Muslim Bangladesh participants, it was revealed that both inadequate parental understanding about sexual health and a lack of sex and relationship education from parents resulted in risk of infection or unwanted pregnancy for youths (**Fernández**; **Chapman**; **Estcourt**, 2008). In a different study, some women reported that parents indicated that abstinence should be maintained, but what constituted abstinence was blurry. Specifically, they believed some behaviors (e.g., oral sex) did not count as sex and, thus, were safe (**Hertzog**, 2008).

Research reflected some topics were minimized, avoided, or outright omitted. In a Thai study, results indicated parents were more likely to talk about body changes and dating and less likely to talk about more sexually-related issues such as using birth control (**Rhucharoenpornpanich** *et al.*, 2012). Similarly, parents in the study who believed their children were sexually active talked about diseases or pregnancy instead of intercourse or when it might be appropriate to start having sex. Another study (**Simpson**, 2012) found that LGBTQ (lesbian/gay/bisexual/transgender/queer) relationships are often absent from sex education, including family conversations; and, further, parent-child sex talk often assumes heterosexuality.

Other family sex talk was related more to sexual identity. In his study of LGB coming out conversations, **Manning** (2015a) found that some participants shared stories where they indicated their parents crossed the line with questions asked, including questions about whether a son participated in insertive or receptive anal sex or how two women could have intercourse. Based on these accounts, he suggests sensitivity to sexual privacy is important for parents to remember in these conversations. On a more positive note, in another study he found many participants appreciated when safe sex was mentioned –although they preferred for it not to be an immediate reaction to coming out or the main topic of the conversation (**Manning**, 2015b). In a third study, **Manning** (2014a) found that many families strongly suggested responsible sexual behavior for gay or bisexual men when they came out, going so far as to create rules about sex.

> Sensitivity to children sexual privacy is important for parents to remember in family conversations

Baxter *et al.* (2009) learned that families tend to set rules about sexual activity for heterosexual children as well. Their study divides these rules into two larger categories. In one category is the abstinence-oriented rules that include not having sex before marriage; age-linked abstinence; preventative abstinence (e.g., "No being alone with boys"); and simple abstinence (e.g., "Do not have sex"). In the second category, they include five contingency-oriented rules under which sexual activity could happen: use of protection; in a close relationship; after discussing with parents; if it is what the child really wants (i.e., not feeling pressured); and specific to a particular location (e.g., "Not in our house"). The study also revealed that parents perceived more-direct communication and a greater sense of justification than adolescents reported, especially in terms of abstinence rules. Parents also believed that their children complied more with their rules than what was actually reported, again especially for rules about abstinence.

Another research program centered parent-child sex talks as they applied to purity pledges, vows children (usually girls) make to not have sex until they are married. Specifically, **Manning** (2015c) analyzed family talk about purity pledges and found that parents initiate such rituals because they want their children to have good lives; modern day sex is terrifying, but if saved for marriage can be a beautiful gift; and because girls have no sexual agency. In another study, he found that families seemed to be in synch about what purity pledges mean when they were being interviewed together (**Manning**, 2013); but when interviewed separately and away from family members, mothers often indicated they were introducing the pledges to their daughters out of loyalty to their husbands (**Manning**, 2013) or as a way of preventing their daughters from making the same sexual mistakes they did (**Manning**, 2017). In two other studies, he found that talk in these families covered both relationship and health aspects of sex (**Manning**, 2014b) and that the talks often examined social influences on sex such as oversexed popular entertainment (**Manning**, 2014d).

> Research indicate frictions between what cultures deem are appropriate and what educators feel they need to teach students about sex

b) Sex education in learning institutions

When it comes to sex education in learning institutions, research from both the U.S. (**Brooks**, 2006) and the UK (**Fernández**; **Chapman**; **Estcourt**, 2008) indicate frictions between what cultures deem are appropriate and what educators feel they need to teach students about sex. Indeed, debates about sex education, including whether relational issues and/or pleasure should be part of the sex education classroom, often exhibit a lack of shared ground about what should be covered (**Brooks**, 2006). Additionally, many sex education programs have access issues, with minorities being especially unlikely to receive formalized sex education (**Fernández**; **Chapman**; **Estcourt**, 2008).

Digging deeper into curriculum, **Lieser** *et al.*, (2007) reviewed six different prominent pre-marital relationship programs to find that most do not spend much time exploring sexuality; and only four of them specifically addressed communication. The authors suggest that sexuality between non-heterosexual couples as well as cohabitating couples be included. **Elia** (2003) points to how textbooks about human sexuality often focus on how same-sex couples have the same intimate relational possibilities as heterosexual couples, reifying a hierarchy of sexuality. More directly related to the topic of this essay, he points to embedded notions in the texts that monogamous sexual relationships in marriage are the ideal status, excluding not only LGB people but those who cohabitate, are in open relationships, or even those interested in casual sex.

In terms of what participants want from sex education, **Allen** (2008) found both similar and additional critiques of sex education. Common complaints included that sexuality education is too clinical, de-eroticized, and moralistic; and participants craved more information about sexual pleasure, emotions and relationships, parenthood, and abortion. They also wanted to feel as if a program offered content that put them into a position to make informed decisions about their own sexual destinies. Similarly, in a large study of Irish youths, **O'Higgins** and **Gabhainn** (2010) found that the most dominant sex education desire was "how to establish healthy respectful, communicative relationships," demonstrating a desire for understanding interpersonal sexuality (p. 387). Finally, another study (**Van-der-Stege** *et al.*, 2010) examined the use of board games as a form of sex education for adolescents with chronic conditions. Participants indicated they saw the games as beneficial for learning sexual health, demonstrating that sex education can be creative, enjoyable, and effective.

3.2. Negotiation of safe sexual practices

As one might expect, many of the articles identified in this area involve negotiation of condom use. For example, **Crowell** and **Emmers-Sommer** (2000) examined the self-efficacy of college students and their sexual situation coping strategies. Even though students reported high condom efficacy, that still had a weak correlation with actual condom use. Further, students tended to use non-communicative coping methods, such as avoidance, rather than discussing safe sex with a partner. Those who did report using condoms regularly were also more likely to embrace communicative coping strategies. In another study, **Juárez** and **Castro-Martín** (2006) surveyed 678 sexually active male adolescents residing in favelas in Brazil. They found that education, HIV knowledge, and condom use during first sexual intercourse were significantly related to current condom use. **Rinaldi-Miles**, **Quick**, and **LaVoie** (2014) found that social proof, consistency, and authority were key principles of influence for decisions about condom use in casual sex encounters.

Wright, **Randall**, and **Hayes** (2012) use the *Expanded health belief model* as a mechanism for understanding condom assertiveness and college women. In their study, women who were condom-assertive tended to see themselves as more susceptible to sexual disease or infection, believed more in condom efficaciousness, had faith in the condom communication skills, believed condom assertiveness was tied to relational beliefs, understood their peers as more condom assertive, and planned to be condom assertive themselves. Other scholars criticized how both condom and safe sex studies in general were often aimed at women. **Gavey**, **McPhilips**, and **Doherty** (2001) particularly criticize this movement in sexuality research, pointing to women not always being fond of safe sex, especially involving condoms, themselves; the lack of control women actually have over condom use; and the propensity for many women to consent to unwanted sexual activity. They also point to how understandings of condom use are engrained in culture, and that cultural narratives about condom use do not necessarily empower women to negotiate safe sex. In fact, it might make them feel constrained.

Women report in another study (**Parker**; **Ivanov**, 2013) that the more experience they have with sexual relationships, the more comfortable they feel with bringing up topics such as contraception or refusing sex when a partner is unwilling to use protection. Further, although many women feel as if they understand the riskiness of unprotected sexual behavior, they also report that sex education does not prepare them for discussing those risks, as well as the protective steps that can be taken to avoid those risks, with their partners. In her discussions with Chinese women, **Liu** (2012) found that many women felt caught between cultural sexual scripts related to sex as a moral issue and sex as a health issue. As a result, this tension compelled many of the women to remain silent about sexuality. As a result, it is likely Chinese women will not only need knowledge about how to have safer sex, but they will also need education about how to negotiate safer sex.

Gender also plays a role in MSM (men who have sex with men) sexuality. As **Haig** (2006) found in his study of a community of gay men, it is often the idea that silence is constructed as masculine that prohibits negotiation of safe sex activity. Safe sex, especially the use of condoms, is also a highly-politicized topic for MSM, as **Payne** (2014) notes in his research involving the conflicting ideas about barebacking presented by professors Tim Dean and Leo Bersani. These discussions include questions about how safe sex campaigns control same-sex sexualities, minimize forms of intimacy, and continue to place family units and reproduction as a core concern. Political implications regarding safe sex can also be highly personal, as is reflected in **Yeo** and **Fung**'s (2016) critical study of Chinese gay men that revealed being labeled as a 0 (docile, bottom) or 1 (assertive, top) impacted condom use. In a critical study of a different nature, **Manning** (2014a) learned from interviews with MSM that they were reluctant to share their sexual identities with physicians because, in part, they knew that they would be asked about whether or not they practiced safe sex, a question they believed was not typically asked of heterosexual patients. According to the study, gay or bisexual men were skeptical that straight men received as much attention around the area of safe sexual practices.

Masculinity was a key focus in a series of qualitative studies exploring interpersonal communication about sex conducted in Puerto Rico. In a first study, **Noland** (2006) found that machismo, changes in the role of virginity, and silence –for both men and women participants– limited meaningful sexual communication. Even if participants wanted to engage in sex talk, cultural notions of masculinity often hampered the initiative or ability to do so. In a second study (**Noland**; **MacLennan**, 2006), men and women participants critiqued flippant attitudes, the inability to create open and honest partner communication, and machismo as problematic for sexual relationships. These findings served as the foundation for a third study (**Noland**, 2008) where both meaningful communication about sex and abilities to negotiate safe sex were seen as limited by the male participants. Again, study participants pointed to machismo as well as messages received as a child about sex as reasons for their reluctance.

Another influence on safe sexual behavior found in the literature was optimistic bias. **Chapin** (2001) examined the connection between optimistic bias, the belief that sex is unlikely to lead to disease or pregnancy, and sexual risk taking for African American youths. His research confirmed that Black adolescents were more likely to have optimistic bias than their non-Black peers, and that this optimistic bias led to risky sexual behavior as well as mo-

> Noland's study participants pointed to machismo as well as messages received as a child about sex as reasons for their reluctance to speak about it

re-permissive attitudes about sexual intentions. As a final note, one research study frames sexual communication in a unique way. Specifically, **Horan** (2016) found that people often disclosed the accurate number of past sexual partners to a current sexual partner as a way of enacting safe sex communication and ensuring that sexual history is accurate before engaging sexual activity.

3.3. Sexual dysfunction

Four studies related to sexual dysfunction were also identified in the research. The sexual dysfunctions related to depression were explored in a qualitative research study by **Knobloch** and **Delaney** (2012) that masterfully examined the intersections of health, relationships, and sexuality, among other topics. The study found that questions regarding physical intimacy were a part of the relational uncertainty couples struggling with depression faced. In revealing this relational uncertainty, the authors share participant accounts of how sexual problems related to overall relationship qualities. No other studies discussing sexual dysfunction were identified for the review, although in a review of the book *Coping with premature ejaculation: How to overcome PE, please your partner, & have great sex* **Ren** (2007) notes that the text uses outdated language such as the titular term "premature ejaculation" rather than the more-current "ejaculatory control" (p. 475). The review author also critiques that the book assumes those suffering from ejaculatory control issues are in a relationship, thus dismissing masturbation as a possibility. On a more positive note, she indicates that the book highlights the value of interpersonal communication as it relates to sex.

Finally, in a more-recently developed research trajectory, **Hintz** (2018, 2019) explores vulvodynia and its impact on sexual relationships. This work is directly related to interpersonal sexual communication, as it examines the implications that the inability to have painless intercourse has on both their relationships and their women-centered identities. The studies offer practical implications, including three communicative strategies for managing vulvodynia-oriented dilemmas: reframing illness in conversation, refocusing how the relationship is articulated, and redefining intimacy. The work also calls into question what constitutes normal heterosexual sex.

4. A review of culture-oriented research about sexual communication

For the next section of this review, I provide an overview of literature that is culture oriented. Although many of these studies might be directly related to relationships or health, they are distinct in that they are weighted more toward impacts on interpersonal interactions as opposed to being a direct observation of interpersonal interactions. Two categories are presented in this section of the review: social influences on sexual communication and media representations as they directly impact or portray interpersonal sexuality.

4.1. Social influences and factors on sexual communication

Many studies examined for the review explore how elements in cultures or societies influence or control interpersonal sexuality. For example, based on his study of Arab adolescents, **Hetsroni** (2008) speculates that the conservative nature of some societies are related to teens being more satisfied with family and other interpersonal or professional information sources about sexuality because the baseline knowledge would be so low that even the most minimal of information would be viewed as valuable. He also found that boys were more likely than girls to turn to the Internet about sex, but that might also be related to boys' overall greater use of the Internet than girls. Similarly, **Noland** (2010) argues that researchers have neglected interpersonal communication about sex, thus causing a gap in academic discourses that, in turn, create a gap in cultural discourses. She and her colleagues (**MacLennan**, **Manning**, and **Noland**, 2010) also make arguments, based on a review of sexual communication literature, that personal elements of sexuality are often obfuscated or minimized in cultural discourses of romance or relationships.

Other researchers focused on how culture allows or disallows a sense of agency. **Egan** and **Hawkes** (2009) make an argument that the sexual agency of children is under-recognized, and that this approach to sexuality is perhaps focusing too much on protecting children instead of helping them to become fully realized sexual beings. **Adams** (2011) draws from personal experience as well as participant interviews to articulate how cultural notions of the closet disallow queer people both the ability to articulate their identities without punishment as well as feeling that their sexual behaviors are their own. **Mahdavi** (2009) examines the current sexual revolution happening in Iran, noting that youths are engaging in more sexual activity even though punishments –including lashings or even public execution– are still part of the law.

Studies also examined college campuses and the sexual cultures they create. **Koelsch**, **Brown**, and **Boisen** (2012) argue that college party environments create a risk for unwanted sex but, given the number of people in a party situation, might also provide a group of people who can intervene when risk occurs. This opportunity for intervention is limited, however, as members of their focus groups indicated that most sexual behavior is probably happening behind closed doors. **Lannutti** and **Denes** (2012) also consider sexuality on college campuses, with a focus on the fetishization of woman-woman kisses. Based on their survey of 164 college students, they found that men saw woman-woman kissing as atypical, at least more so than women. A woman kissing a woman was seen as more "promiscuous" than a woman kissing a man, and a woman kissing a woman was also seen as more likely being heterosexual than lesbian or bisexual.

"Researchers have neglected interpersonal communication about sex, thus causing a gap in academic discourses that, in turn, create a gap in cultural discourses"

Other studies focus more on the control of sexuality, especially through language. **Adams** (2009) explores how language and discourse reflexively relate to sexual identities and practices. In his essay, he unpacks a slur that was yelled at him while walking. In addition to exploring the slur's violent implications, he also considers how the phrase relates to "Your mama" jokes; how these jokes invoke notions of a younger man sleeping with a sexless, undesired older woman; and how it assumes that the receiver of the slur desires women and wants to have sex with them. In another study exploring sexual identity, **Manning** (2015d) found that gay or lesbian people were often told they needed to try sex with an opposite-sex partner before they could confirm their sexual identities. In a different study (**Manning**, 2014a), he found that immediate surroundings, such as religious imagery or indicators of a conservative political nature, influenced what sorts of sexual behavior gay men would discuss –especially in family homes and medical settings.

Although it does not focus on social control, another language-focused study (**Peck** *et al.*, 2016) examines what, exactly, people mean when they use the term "had sex." Drawing from surveys completed by adults in the U.S., the study reveals that some people, especially those who are older, would say they had sex if the most sexual activity they had engaged was open-mouthed kissing. As might be expected, people were more likely to not claim they had sex with activity such as penile-anal penetration or oral sex, with men generally claiming more activity as having had sex than women. Also as expected, the most selected sexual activity that participants counted as having had sex is penile-vaginal intercourse.

Other research focused on the contributions of online culture to interpersonal sexual communication understandings. For example, **Lunceford** (2013a) examines how particular sex behaviors are articulated in cultures, especially via online media, to create a sense of notoriety. Through his analysis of sex acts including the Donkey Punch, the Cleveland Steamer, and the Houdini, he identifies three categories of sex acts: scatological acts, humiliating acts, and violent acts. In another study, **Holman** and **Sillars** (2012) examine how social networks encourage high-risk sexual relationships among college students, especially in terms of hooking up. In addition to findings related to sexual health, they discovered that students tended to overestimate how much others were hooking up. Other hookup research (**Kratzer**; **Aubrey**, 2016) indicates men see little difference between their ideal and actual hookups; whereas women had "very different" actual experiences in contrast to their ideal scenarios (p. 236).

4.2. Media influence and representations of sexual communication

Other studies embraced critical humanistic approaches to consider what popular texts have to offer constructions of interpersonal sexuality. In one of these studies, **Kgafela** (2007) contrasted the male persona found in Barolong Seboni's love songs and how their sexual freedoms, including descriptions of sexual acts, were in contrast to the sexuality of women who were controlled by men and left to no sexual adventure or excitement. **Amaya** and **Blair** (2007) praise the films *Y tu mama tambien* and *Muchacha* as progressive texts that critique traditional sexualities and allow for space to develop new masculine friendships, including shared physical sexual expression, in Latin America. **Eguchi**, **Calafell**, and **Files-Thompson** (2014) note that queer people of color are rarely portrayed in film before critically analyzing a Black same-sex relationship in the film *Noah's Arc: Jumping the broom*. This critique particularly examines portrayals of monogamy and sexually transmitted deseases (STDs) in the film, and how they might construct notions about Black same-sex sexuality. Finally, **Manning** (2011) compares the television programs *The bachelor*, *Flavor of love*, and *Boy meets boy* to examine the sexual liberties white straight, Black straight, and white gay men, respectively, are allowed to take or not take as part of reality television. His analysis notes that straight white men are presented as gentleman, with sexual behaviors happening behind the scenes; Black men are portrayed as hypersexual and aggressive; and gay white men are not allowed to be portrayed as sexual at all, with more of a focus on romance or even cross-sex friendship.

Other studies were more empirical in nature. **Bond** (2014) used content analysis to quantify sexual messages in a sample of music, films, television programs, and magazines popular with LGB youth. He found that LGB representation was underrepresented compared to heterosexuality and that LGB sexual talk was often based on stereotypes or insults related to sexuality and not relationships or sex. In a follow-up study (**Bond**, 2015) that focused specifically on gay- and lesbian-oriented media, he found that those sources depicted a diverse array of LGB relationships as well as diverse sexual interests and behaviors. As he noted, these portrayals were more realistic than what was found in mainstream media. Similarly, another study (**Aubrey** *et al.*, 2020) examining the heterosexual script on young-adult television programming found that the dominant heterosexual script is sex as masculinity (among other findings).

In another content analysis study, this one examining articles about sexuality and relationships from a year of *Cosmopolitan* magazine, 52% of the articles suggested women were responsible for a man's sexual pleasure, 29% suggested women were responsible for their own sexual pleasure, and only 18% suggested both men and women were mutually responsible for pleasure (**Gupta**; **Zimmerman**; **Fruhauf**, 2008). The articles analyzed for the study often included specific actions and sayings for women to use in sexual situations. The authors also found that the magazine offered other forms of relational advice that were stereotypical and that assumed heterosexuality. **Gupta** and **Cacchioni** (2013) also found that manuals aimed at improving sexual interaction are now focusing on a new discourse of "sex as health," adding a new form of sexual pressure to what they characterize at the "growing pressure to master, improve, and work on sex" (p. 442).

> Research indicated popular media acted as an informant for sexual beliefs

Research also indicated popular media acted as an informant for sexual beliefs. **Comella** (2013) found that discourses surrounding the popular book *Fifty shades of G*

rey were informing people's understandings of BDSM. Similarly, **Manning's** (2014d) study of purity ring families demonstrated that parents used popular culture as an indicator of cultural sexual beliefs and behaviors and as an informant about what issues they should address with their families. Finally, looking at a different way that media texts inform sex lives, **Daneback**, **Træen**, and **Månsson** (2009) used questionnaire data from 398 heterosexual couples to examine how pornography was used to enhance their sex lives. They found that 77% of the couples reported no pornography use, 15% reported that both had used pornography, in 5% of the couples only the man and in 3% only the woman had used pornography. The same study suggested couples where at least one used pornography had a more-permissive erotic climate compared to those that did not. When only one partner used pornography, it was often associated with arousal problems (men) or self-perception issues (women).

> Sociopsychological approaches were the most commonly used theoretical approach to the studies collected for this review

5. Metatheoretical approaches to sex and relationship studies

As a response to the literature summarized in sections 2-4, and in answering the second guiding question for this project, I now consider the theoretical commitments that interpersonal sexual communication studies embrace. To sensitize myself to this endeavor, I have reviewed past research about theoretical traditions in the communication discipline (e.g., **Craig**, 1999; **Craig**; **Muller**, 2007) as well as theoretical traditions common to interpersonal communication studies (**Manning**, 2014c). Not surprisingly, and similar to other areas of interpersonal communication research, sociopsychological approaches were the most commonly used theoretical approach to the studies collected for this review. Critical perspectives were also extensively used by researchers, and even though that is not typically the case in interpersonal communication studies the finding was not surprising given that critical approaches are quite common in sexuality studies (see **Manning**, 2014b). In particular, feminist or queer approaches were especially used, sometimes in conjunction with rhetorical theory or other non-social scientific methods. The only other theoretical traditions to gain much traction were sociocultural approaches and biological approaches. Table 1 features an overview of the dominant metatheoretical approaches found in the review of literature as well as defining characteristics of each tradition as they apply to interpersonal sexual communication studies.

Table 1. Metatheoretical overview of interpersonal communication studies about sex and relationships

Tradition	Communication as…	Interpersonal metadiscursive vocabulary	Intellectual interests	Sample topical, conceptual, or theoretical manifestations from this review
Sociopsychological	Interaction, influence, and expression	Effect, behavior, variable, emotion, perception, personality, attitude, cognition, interaction	Communication reflecting personality; beliefs, feelings, judgments, and bias; humans as rational; perception	- Safe sex communication (e.g., **Li**; **Samp**, 2019) - Sex as expectation (e.g., **Emmers-Sommer** *et al.*, 2010)
Critical	Reflection on discourse	Resistance, individualism, dialectic, ideology, paradoxes, consciousness, emancipation, historicity	Distribution or circulation of power; awareness and insight; questioning of objectivity; sites of knowledge; freedom, reason, equality	- Heteronormativity (e.g., **Adams**, 2011) - Sexual consent (e.g., **Koelsch**, 2014)
Sociocultural	Negotiation/ production and reproduction of social reality	Performance, culture, identity, negotiation, stories, rules and rituals, sensitization, socialization, co-construction	Negotiation of identity in society; social actions; social construction of reality; meaning-making through interaction	- Sex and aging (e.g., **Manning**; **Adams**; **Atay**, 2020) - Peak experiences in relationships (**Woodward** *et al.*, 2009)
Biological	Genetic	Brain and behavior, hormones, genetics, evolution, physiology	Relationship between human behavior and genetic influence	- Oxytocin and post-sex talk (e.g., **Denes**, 2012) - Affection exchange theory and sex (e.g., **Horan**, 2016)

As the table illustrates, theoretical variety in interpersonal communication studies of sex is limited, especially considering the field of communication studies writ large has at least 12 different theoretical traditions (see **Craig**; **Muller**, 2007). This lack of paradigmatic diversity is explored more in-depth in the final section of this review where I explore areas for growth.

6. Continuing the momentum: Areas for growth and development

Drawing from both the typology of research studies presented in this review and the metatheoretical inclinations presented in the previous section –and in line with the third guiding question for this review of scholarship– the final segment of this essay focuses on how interpersonal communication scholarship about interpersonal sexual communication could develop to make the most of the limited momentum that has been gained over the past two decades. I specifically focus on five problems related to interpersonal sexual communication research: missing research foundations, a lack of methodological innovation, heteronormativity in sexual communication research, a lack of meaningful findings and/or theoretical development, and evading sex in sexual communication research.

6.1. Establishing research foundations

One of the most startling aspects of this literature review is how few researchers have ongoing programs related to relationships, sexuality, and interpersonal communication that could be discovered via the methods used for this article. Although the methods for this review are limited in that they do not explore the totality of interpersonal sexual communication research –as many communication studies about sex are published in non-communication field journals and other disciplines are certainly doing research about sexual communication– it is still disheartening that so little sex research is making it into the core disciplinary research database. For many of the scholars cited here, it was one-study-and-done in terms of their contributions. Some of the scholars had additional conference papers about interpersonal sexuality (per the *Communication and Mass Media Complete* database or as discovered via *Google Scholar*), and so it is not necessarily the case that this research is not being done or a program continued. It is evident, however, that not all of this research is being published. The reason for this might be that sex scholarship does not always receive respect in the communication discipline (**Comella**; **Sender**, 2013); or it could be that many sex researchers are not at universities that are research-intensive in terms of their mission. It could also be because the research is of a low quality and not suitable for publication.

“Sex scholarship does not always receive respect in the communication discipline”

Regardless of reason, and given the importance of sex and sexuality to most people's everyday lives, support for sex research in the communication discipline is essential. The lack of interpersonal sexual communication research programs also means few models exist for emulation. As an exercise in considering where traction is being gained, I present here a table with researchers who, based on the methods used for this review, have achieved 5 or more total publications related to interpersonal sexual communication since 2000 (see Table 2). Nine different scholars were identified, a small number considering that inclusion in the table represents an average of about one publication every four years covered in this review. In other words, research about interpersonal sexual communication is being produced slowly by those who are continuing to do such work. That being stated, three of the scholars (Denes, Manning, and Rubinsky) had five or more articles in the past five years alone; and all three of these researchers earned their Ph.D. in 2006 or later. Their productivity indicates that recent research programs might be producing research more quickly as well as receiving more support both from the field and their research institutions.

Table 2. Researchers with five or more publications about sex and interpersonal communication, 2000-2020

Researcher	Most recent affiliation	Research area(s)
Amanda Denes	*University of Connecticut*	Pillow talk; infidelity; orgasm authenticity; perceptions of sex and sexuality; physiology
David D. Henningsen	*Northern Illinois University*	Flirting
Kristen Jozkowski	*Indiana University*	Consent
Betty La-France	*Northern Illinois University*	Sexual scripts; social-sexual interactions; self-disclosure
Brett Lunceford	*Independent Scholar*	Sexual ethics; the implications of media on sexual relationships
Jimmie Manning	*University of Nevada, Reno*	Purity rings; sexting; coming out; consent; sexual harassment; surveillance; aging; methodology
Paul A. Mongeau	*Arizona State University*	Dating; friends with benefits; alcohol use and sex
Carey Noland	*Northeastern University*	Talk about sex; sex and sexuality in Puerto Rico
Valerie Rubinsky	*University of Maine at Augusta*	Memorable messages about sex; BDSM; sexual and gender minorities

The range of research covered in these scholars' programs as well as their diverse theoretical and methodological approaches is also heartening. Rhetorical (Lunceford), semiotic (Lunceford), phenomenological (Manning), sociopsychological (Denes; Henningsen; Jozkowski; Mongeau; Rubinsky), sociocultural (Jozkowski; Manning; Noland; Rubinsky), critical (Denes; Lunceford; Manning), cybernetic (Manning), and biological (Denes; Henningsen) traditions or approaches were represented in their work, with many scholars crossing over into multiple traditions or blending more than one tradition in a single study. Still, one common element among all of these researchers is that they are limited in how they conceptualize sex in their studies. Most are looking at sex indirectly or in hypothetical scenarios.

Moving beyond the most prolific researchers in the review, it is also important to note that many of the scholars who authored only one study came from disciplines other than communication or media studies. These fields or disciplines include sociology, women's studies, education, family studies, English, anthropology, and others. That suggests that conceptual and theoretical work in the communication discipline might come from exploring other-disciplinary work. It is also important to note that some scholars within the communication discipline who have one or more studies in this review have also studied other topics related to sexuality but that did not meet this review's rules of inclusion. Notable examples include Tony E. Adams and Michaela D. E. Meyer who have written many academic essays about sexual identities; Tara M. Emmers-Sommer, who has a rich research history in the area of sexual health; and the duo of Patti M. Valkenburg and Jochen Peter who have a high-impact research program involving online sexuality. Sociologist Susan Sprecher and public health scholar Laura Widman also have extensive research programs related to interpersonal sexuality that crosses into communication topics and concepts. Their work –and the work of others– might serve as inspiration for interpersonal communication work directly related to sex.

The typical quantitative/qualitative disparity that favors postpositive perspectives in interpersonal communication studies is not so evident in this body of studies

That being stated, it is also notable that the scholars identified here are all white and from the U.S. Those who do sexual interpersonal communication research should consider how they can make their topical area of the field welcome to scholars of color and from across the world.

6.2. Developing research methods and approaches

This review also reveals that the typical quantitative/qualitative disparity that favors postpositive perspectives in interpersonal communication studies (see **Braithwaite**; **Schrodt**; **Carr**, 2015) is not so evident in this body of studies. This result is partially due to the constitutive philosophy and methods guiding this review; but it is also only possible because researchers are embracing a wider range of methods for their work. That does not mean that scholars cannot continue to push forward with methodological innovation in studies of sex and relationships. As **Manning** and **Kunkel** (2014a) note, qualitative interpersonal relationship studies tend to rely too much on thematic analysis in lieu of more sophisticated interpretive-analytical approaches. Many of the articles reviewed for this study fell prey to the limitations of thematic analysis. One possible reason for this might be the difficulty of constructing a literature review about interpersonal sexuality topics. Research about interpersonal sexuality is spread across many disciplines as past reviews (e.g., **Sprecher**; **Christopher**; **Cate**, 2006) and this review itself suggests. Given this spread, and the aforementioned lack of research foundations in interpersonal communication studies, it could be more difficult to iteratively consider the emerging qualities of qualitative data by using existing research as a heuristic. That, in turn, might limit what the data can say about the topic of focus. This concern also applies to quantitative studies.

Moving to another observation, many of the quantitative studies reviewed in this essay lend themselves well to qualitative follow-up studies. For example, in **La-France**'s (2010b) study about sexual scripts –a topic that in many ways lends itself to both postpositive and interpretivist theorizing– she suggests that the nuances of contemporary sexual scripts be explored, even if those sexual scripts follow the same general pattern of existing scripts. Interpretive qualitative methods could be especially useful for collecting such descriptive data and then tying it back to the quantitative studies or –even more likely, given the revelations often made during iterative analysis of qualitative data– create new, sophisticated, and potentially exciting theories or concepts related to sexual scripts. Relatedly, few of the studies reviewed used mixed methods, and only one (**Ross** *et al.*, 2007) used mixed methodology in its truest sense (see **Cresswell**, 2014). More specifically, even thought multiple methods were used by researchers for a single project, none of the studies took advantage of mixing postpositivist and interpretivist paradigms to develop sets of data that could be analyzed together to create multivalent and mutually-informative findings.

Interpersonal sex researchers should also continue to explore how to develop methods that will accurately reflect the people and cultures engaged in their studies. It is important that as this work is done, it is considered that situations and contexts change over time. As **Sprecher**, **Harris** and **Meyers** (2008) note, few studies about sex and sexuality are conducted in ways that foreground or even recognize changing attitudes and cultures. These changes should be considered during theorizing. The addition of longitudinal studies would also be illuminating both for understanding how people and cultures change but also for putting studies into context when being reviewed, translated for practical use, or when being considered in conjunction with the design of a new study.

Finally, those who are newer to interpersonal communication studies of sex and relationships can turn to multiple sources in order to consider how they might go about doing their work. **Comella** and **Sender** (2013) talk about many of the political challenges associated with doing such work, and their perspective is particularly useful for critical scholars who embrace humanistic approaches to scholarship. **Denes** (2013) offers a candid reflection on her challenges of researching post-sex communication, detailing many aspects of her quantitative work including research design, participant recruitment, and explaining her studies to others. **Manning** (2013) details how he developed two new qualitative analytical tools to do research related to sex, and he also offers advice for promoting qualitative work, especially to scholars who misunderstand its advantages.

Even thought multiple methods were used by researchers for a single project, none of the studies took advantage of mixing postpositivist and interpretivist paradigms to develop sets of data that could be analyzed together to create multivalent and mutually-informative findings

6.3. Eliminating heteronormativity in sexual communication studies

This review of literature also exposes just how common heteronormative values and assumptions are exhibited in interpersonal sexual communication scholarship. Perhaps most notably, many studies are focused on gender differences. Specifically, many studies gravitate toward the idea that men behave one way and women another when it comes to interpersonal sexuality; and then also that men are attracted to women and women are attracted to men. On a deeper level, many of the studies carry values aligned with heterosexual monogamy; and, further, the research, even when conducted from theoretical and methodological stances that value objectivity, use words such as "promiscuous" to describe sexual behavior. Such heteronormative values and assumptions have been noticed more generally in communication studies (see **Manning** *et al.*, 2020) and especially in interpersonal and family communication studies (see **Chevrette**, 2013; or **Foster**, 2008). It is evident that even when scholars are attuning themselves to human sexuality as part of their communication research, they are still embracing heteronormativity; and that, in turn, has an impact on how identity is situated in such research.

> Sex researchers must consider sex beyond heteronormative domains

Moving forward, sex researchers must consider sex beyond heteronormative domains. That also includes considering that sex is, many times, simply be for pleasure and does not involve negative aspects; that many different forms of sexual relationships exist, including in gender-diverse partnerships and polyamorous relationships, among others; and that even as individuals enact in sex those actions are embedded in particular personal and social relationships as well as cultural practices and knowledges. In other words, sophisticated thinking about sex and its implications is called for when it comes to interpersonal sexual communication research.

One way to combat closed-mindedness and judgmental sexual research is to embrace more of the tenets of queer theory. Simply put, queer theory is a body of theory that examines cultural expectations regarding genders and sexualities and how such expectations are limiting and/or harmful to those whose sexualities are perceived as different. Although queer theory is primarily used to explore LGBT sexualities as well as the experiences of other sexual and gender minorities, it is also a beneficial tool for understanding sexual acts and identities that are more heteronormative in nature. For a deeper consideration of how queer theory can be applied to interpersonal sexual communication research and theorizing, see **Manning** (2020) or **Manning** and **Adams** (in press).

6.4. Focusing on applied understandings and practical theory

At its best, interpersonal communication studies of sex and relationships can answer important questions with helpful research findings that lend themselves to the development of informative theories. One excellent example of this is **Dougherty** *et al.*'s (2009) exploration of workplace relationships and how behaviors that one person believes are flirting could be perceived as sexual harassment by another. The resulting theoretical development of language convergence/meaning divergence not only informs interpersonal communication studies of sex and communication but creates a theory that can be used or tested in other contexts where meaning about cues can be disjunctive. In short, the study offers a new, helpful theoretical explanation for what is happening about sexual communication that, in turn, informs a big problem that plagues many workplaces and has ideas that are transferable to other studies. Although it is true that every study cannot develop a new theory or help to solve sexual problems to this extent, it would be ideal if all studies could embrace possibilities for helping people with their sexual problems, both big and small in some way.

Big problems that lead to big research questions about interpersonal communication and sex are frequently featured in news and popular culture, but as this review indicates many of those problems or questions are not being addressed or answered. For example, even though some scholars have looked at issues of sexual consent –a topic that is directly related to interpersonal communication– few studies were identified that examined consent. For those that were identified, none examined what did or did not constitute consent, how consent could be approached in sexual relationships, or how or why consent was seen as confusing. One way to develop positive recognition for interpersonal studies of sex is to embrace –and perhaps use research to solve– big questions about sex and relationships. Yet, at the same time, some of the basic problems associated with interpersonal sex are missing as well. Where are the studies that explore *how* to communicate about sexual pleasure in bed? Why are there no studies that suggest how people might introduce fantasies to sexual partners? What about research that examines how a partner responds when he prematurely ejaculates?

6.5. Theorizing sex as communication

Looking across the 88 articles reviewed for this essay, it is apparent that although the authors of each are asking important questions about sex in their own right, it is not always apparent what *sex* is and what these multiple iterations of sex have in common. When examining the ideas and concepts surrounding sex, the waters become even muddier. For example, in his critical essay about using research about desire in the clinic, **Levine** (2003) laments how,

> "researchers must simplify desire in order to measure it," especially because it is a "slippery concept" (p. 279).

Sex research, and interpersonal communication research in general, is filled with such slippery concepts. One of the reasons a discourse approach to thematic analysis was used to sort and describe the research included in this review was to examine how similar ideas might work together. For example, the terms *relationship satisfaction* and *sexual satisfaction* have a particular meaning for many quantitative researchers, but in honoring participant voices many qualitative researchers write about these forms of satisfaction in a different way and with different meanings.

Although there is certainly value to having rigid understandings of what, exactly a term such as *relationship satisfaction* means in terms of social scientific research –after all, a clear conceptualization avoids the slipperiness of such a term– the locking in of this idea means that lived elements of slipperiness are deflected, minimized, or erased. To avoid such emotional or perceptual erasure, and to promote the different ways people see and experience concepts related to sex and relationships, I return to the idea introduced at the beginning of this essay: As scholars forge ahead with interpersonal communication studies of sex and relationships, it is important that theories, concepts, and applications remain constitutive. In presenting topics from across research paradigms and theoretical traditions, I have tried to combine sometimes disparate ideas to consider how researchers of sex, relationships, and communication, might view and learn from each other's work.

Given that purview, I close with a final challenge for interpersonal sex scholars. Given that a review of 20+ years' worth of interpersonal communication studies about sex and relationships did not yield a single article that theorizes sex *as* communication, I submit a series of questions that scholars in the area should take seriously: How can interpersonal communication scholars study sex *as* communication? What does sex mean? What is its symbolic value? I ask these questions not only in terms of sex as an abstract idea, but also in consideration of it being a physical and/or mental act. How does sex serve as communicative interaction? What messages are involved? What does sex mean to relationships and interpersonal communication? Finally, what does answering these questions mean to the totality of work in this area? What happens to interpersonal communication studies of sex and relationships then?

> This review of 20+ years' worth of interpersonal communication studies about sex and relationships did not yield a single article that theorizes sex *as* communication

7. References

Adams, Tony E. (2008). "A review of narrative ethics". *Qualitative inquiry*, v. 14, n. 2, pp. 175-194.
https://doi.org/10.1177/1077800407304417

Adams, Tony E. (2009). "Mothers, faggots, and witnessing (un)contestable experience". *Cultural studies - critical methodologies*, v. 9, n. 5, pp. 619-626.
https://doi.org/10.1177/1532708609339488

Adams, Tony E. (2011). *Narrating the closet: An autoethnography of same-sex attraction.* Walnut Creek: Left Coast. ISBN: 978 1 59874 620 4

Afifi, Tamara D.; **Joseph, Andrea**; **Aldeis, Desiree** (2008). "Why can't we just talk about it? An observational study of parents' and adolescents' conversations about sex". *Journal of adolescent research*, v. 23, n. 6, pp. 689-721.
https://doi.org/10.1177/0743558408323841

Afifii, Walid A.; **Lee, Josephine W.** (2000). "Balancing instrumental and identity goals in relationships: the role of respect directness and request persistence in the selection of sexual resistance strategies". *Communication monographs*, v. 67, n. 3, pp. 284-305.
https://doi.org/10.1080/03637750009376511

Allen, Louisa (2008). "They think you shouldn't be having sex anyway: young people's suggestions for improving sexuality education content". *Sexualities*, v. 11, n. 5, pp. 573-594.
https://doi.org/10.1177/1363460708089425

Amaya, Hector; **Blair, Laura S.** (2007). "Bridges between the divide: the female body in *Y tu mama también* and *Muchacha*". *Studies in Hispanic cinemas*, v. 4, n. 1, pp. 47-62.
https://doi.org/10.1386/shci.4.1.47/1

Anderson, Mike; **Kunkel, Adrianne**; **Dennis, Michael R.** (2011). "Let's not talk about that: bridging the past sexual experiences taboo to build healthy romantic relationships". *Journal of sex research*, v. 48, n. 4, pp. 381-391.
https://doi.org/10.1080/00224499.2010.482215

Angera, Jeffrey J.; **Brookins-Fisher, Jodi**; **Inungu, Joseph N.** (2008). "An investigation of parent/child communication about sexuality". *American journal of sexuality education*, v. 3, n. 2, pp. 165-181.
https://doi.org/10.1080/15546120802104401

Aubrey, Jennifer S.; **Yan, Kun**; **Terán, Larissa**; **Roberts, Lindsay** (2020). "The heterosexual script on tween, teen and young-adult television programs: a content analysis update and extension". *The journal of sex research*, v. 57, n. 9, pp. 1134-1145.
https://doi.org/10.1080/00224499.2019.1699895

Baumgartner, Susanne E.; **Valkenburg, Patti M.**; **Peter, Jochen** (2010a). "Assessing casualty in the relationship between adolescents' risky sexual online behavior and their perception of this behavior". *Journal of youth and adolescence*, v. 39, n. 10, pp. 1226-1239.
https://doi.org/10.1007/s10964-010-9512-y

Baumgartner, Susanne E.; **Valkenburg, Patti M.**; **Peter, Jochen** (2010b). "Unwanted online sexual solicitation and risky sexual online behavior across the lifespan". *Journal of applied developmental psychology*, v. 31, n. 6, pp. 439-447.
https://doi.org/10.1016/j.appdev.2010.07.005

Baxter, Leslie A.; **Bylund, Carma L.**; **Imes, Rebecca**; **Routsong, Tracy** (2009). "Parent-child perceptions of parental behavioral control through rule-setting for risky health choices during adolescence". *Journal of family communication*, v. 9, n. 4, pp. 251-271.
https://doi.org/10.1080/15267430903255920

Bennett, Margaret; **Denes, Amanda** (2019). "Lying in bed: an analysis of deceptive affective messages during sexual activity in young adults' romantic relationships". *Communication quarterly*, v. 67, n. 2, pp. 140-157.
https://doi.org/10.1080/01463373.2018.1557722

Bisson, Melissa A.; **Levine, Timothy R.** (2009). "Negotiating a friends with benefits relationship". *Archives of sexual behavior*, v. 38, pp. 66-73.
https://doi.org/10.1007/s10508-007-9211-2

Bond, Bradley J. (2014). "Sex and sexuality in entertainment media popular with lesbian, gay and bisexual adolescents". *Mass communication and society*, v. 17, n. 1, pp. 98-120.
https://doi.org/10.1080/15205436.2013.816739

Bond, Bradley J. (2015). "Portrayals of sex and sexuality in gay-and-lesbian-oriented media: a quantitative content analysis". *Sexuality & culture*, v. 19, n. 1, pp. 37-56.
https://doi.org/10.1007/s12119-01409241-6

Braithwaite, Dawn O.; **Schrodt, Paul**; **Carr, Kristen** (2015). "Meta-theory and theory in interpersonal communication research". In: Braithwaite, Dawn O.; Schrodt, Paul (eds.). *Engaging theories in interpersonal communication: Multiple perspectives*, 2nd ed. Thousand Oaks: Sage, pp. 1-20. ISBN: 978 1 452261409

Brooks, Ann (2006). "Gendering knowledge". *Theory, culture & society*, v. 23, n. 2-3, pp. 211-214.
https://doi.org/10.1177/026327640602300246

Browning, James R.; **Hatfield, Elaine**; **Kessler, Debra**; **Levine, Tim** (2000). "Sexual motives, gender, and sexual behavior". *Archives of sexual behavior*, v. 29, n. 2, pp. 135-153.
https://doi.org/10.1023/A:1001903705153

Chapin, John (2001). "It won't happen to me: the role of optimistic bias in African American teens' risky sexual practices". *Howard journal of communication*, v. 12, n. 1, pp. 49-59.
https://doi.org/10.1080/10646170119661

Chevrette, Roberta (2013). "Outing heteronormativity in interpersonal and family communication: feminist applications of queer theory 'beyond the sexy streets'". *Communication theory*, v. 23, n. 2, pp. 170-190.
https://doi.org/10.1111/comt.12009

Coffelt, Tina A. (2010). "Is sexual communication challenging between mothers and daughters?" *Journal of family communication*, v. 10, n. 2, pp. 116-130.
https://doi.org/10.1080/15267431003595496

Coffelt, Tina A. (2018). "Sexual goals, plans and actions: Toward a sexual script emerging adults use to delay or abstain from sexual intercourse". *Western journal of communication*, v. 82, n. 4, pp. 416-438.
https://doi.org/10.1080/10570314.2017.1400095

Coffelt, Tina A.; **Hess, John A.** (2014). "Sexual disclosures: Connections to relational satisfaction and closeness". *Journal of sex & marital therapy*, v. 40, n. 6, pp. 577-591.
https://doi.org/10.1080/0092623X.2013.811449

Coffelt, A. Tina; **Olsen, N. Loreen** (2014). "No more birds and bees: A process approach to parent-child sexual communication". *Annals of the International Communication Association*, v. 38, n. 1, pp. 207-240.
https://doi.org/10.1080/23808985.2014.11679163

Comella, Lynn (2013). "Fifty shades of erotic stimulus". *Feminist media studies*, v. 13, n. 3, pp. 563-566.
https://doi.org/10.1080/14680777.2013.786269

Comella, Lynn; **Sender, Katherine** (2013). "Doing it: methodological challenges of communication research on sexuality". *International journal of communication*, v. 7, pp. 2560-2574.
https://ijoc.org/index.php/ijoc/article/view/2507

Cowan, Renee L.; **Horan, Sean M.** (2014). "Why are you dating him? Contemporary motives for workplace romances". *Qualitative research reports in communication*, v. 15, n. 1, pp. 9-16.
https://doi.org/10.1080/17459435.2014.955587

Craft, Ashley-John (2012). "Love 2.0: a quantitative exploration of sex and relationships in the virtual world *Second Life*". *Archives of sexual behavior*, v. 41, n. 4, pp. 939-947.
https://doi.org/10.1007/s10508-012-9933-7

Craig, Robert T. (1999). "Communication theory as a field". *Communication theory*, v. 9, pp. 119-161.
https://doi.org/10.1111/j.1468-2885.1999.tb00355.x

Craig, Robert T.; **Muller, Heidi L.** (2007). *Theorizing communication: Readings across traditions*. Thousand Oaks: Sage. ISBN: 978 1 41295 237 8

Cresswell, John W. (2014). *Research design: Qualitative, quantitative, and mixed method approaches*, 4th ed. Thousand Oaks: Sage. ISBN: 978 1 45222 610 1

Crowell, Tara L.; **Emmers-Sommer, Tara M.** (2001). "If I knew then what I know now: seropositive individuals' perceptions of partner trust, safety and risk prior to HIV infection". *Communication studies*, v. 52, n. 4, pp. 302-323.
https://doi.org/10.1080/10510970109388566

Curnutt, Hugh (2012). "Flashing your phone: sexting and the remediation of teen sexuality". *Communication quarterly*, v. 60, n. 3, pp. 353-369.
https://doi.org/10.1080/01463373.2012.688728

Daneback, Kristian; **Træen, Bente**; **Månsson, Sven-Axel** (2009). "Use of pornography in a random sample of Norwegian heterosexual couples". *Archives of sexual behavior*, v. 38, n. 5, pp. 746-753.
https://doi.org/10.1007/s10508-008-9314-4

Denes, Amanda (2011). "Biology as consent: problematizing the scientific approach to seducing women's bodies". *Women's studies international forum*, v. 35, n. 5, pp. 411-419.
https://doi.org/10.1016/j.wsif.2011.05.002

Denes, Amanda (2012). "Pillow talk: exploring disclosures after sexual activity". *Western journal of communication*, v. 72, n. 2, pp. 91-108.
https://doi.org/10.1080/10570314.2011.651253

Denes, Amanda (2013). "Engaging pillow talk: the challenges of studying communication after sexual activity". *International journal of communication*, v. 7, pp. 2495-2506.
https://ijoc.org/index.php/ijoc/article/viewFile/2252/1022

Denes, Amanda (2018). "Toward a post-sex disclosures model: exploring the associations among orgasm, self-disclosure, and relationship satisfaction". *Communication research*, v. 45, n. 3, pp. 297-318.
https://doi.org/10.1177/0093650215619216

Denes, Amanda; **Afifi, Tamara D.** (2014). Pillow talk and cognitive decision-making processes: exploring the influence of alcohol on communication after sexual activity". *Communication monographs*, v. 81, n. 3, pp. 333-358.
https://psycnet.apa.org/doi/10.1080/03637751.2014.926377

Denes, Amanda; **Crowley, John P.**; **Makos, Shana**; **Whitt, Joseph**; **Graham, Kristen** (2018). "Navigating difficult times with pillow talk: post sex communication as a strategy for mitigating uncertainty following relational transgressions". *Communication reports*, v. 31, n. 2, pp. 65-77.
https://doi.org/10.1080/08934215.2017.1386792

Denes, Amanda; **Crowley, John P.**; **Winkler, Kara L.**; **Dhillon, Anuraj**; **Ponivas, Ambyre L. P.**; **Bennett, Margaret** (2020). "Exploring the effects of pillow talk on relationship satisfaction and physiological stress responses to couples' difficult conversations". *Communication monographs*, v. 87, n. 3, art. 267290.
https://doi.org/10.1080/03637751.2020.1726424

Denes, Amanda; **Dhillon, Anuraj**; **Speer, Annika C.** (2017). "Relational maintenance strategies during the post sex time interval". *Communication quarterly*, v. 65, n. 3, pp. 307-332.
https://doi.org/10.1080/01463373.2016.1245206

Donovan, Sandra; **Emmers-Sommer, Tara M.** (2012). "Attachment style and gender as predictors of communicative responses to infidelity". *Marriage & family review*, v. 48, n. 2, pp. 125-149.
https://psycnet.apa.org/doi/10.1080/01494929.2011.626670

Dougherty, Debbie S.; **Kramer, Michael W.**; **Klatzke, Stephanie R.**; **Rogers, Teddy K.** (2009). "Language convergence and meaning divergence: a meaning centered communication theory". *Communication monographs*, v. 76, n. 1, pp. 20-46.
https://doi.org/10.1080/03637750802378799

Egan, R. Daniella; **Hawkes, Gail** (2009). "The problem with protection: or, why we need to move towards recognition and the sexual agency of children". *Continuum: journal of media & cultural studies*, v. 23, n. 3, pp. 389-400.
https://doi.org/10.1080/10304310902842975

Eguchi, Shinsuke; **Calafell, Bernadette M.**; **Files-Thompson, Nicole** (2014). Intersectionality and quare theory: fantasizing African American same-sex relationships in *Noah's Arc: Jumping the broom*". *Communication, culture & critique*, v. 7, n. 3, pp. 371-389.
https://doi.org/10.1111/cccr.12054

Elia, John P. (2003). "Queering relationships: toward a paradigmatic shift". *Journal of homosexuality*, v. 45, n. 2-4, pp. 61-86.
https://doi.org/10.1300/J082v45n02_03

Emmers-Sommer, Tara M.; **Farrell, Jenny**; **Gentry, Ashlyn**; **Stevens, Shannon**; **Eckstein, Justin**; **Battocletti, Joseph**; **Gardener, Carly** (2010). "First date sexual expectations: the effects of who asked, who paid, date location and gender". *Communication studies*, v. 61, n. 3, pp. 339-355.
https://doi.org/10.1080/10510971003752676

Fernandez, Teena; **Chapman, Jennifer**; **Estcourt, Claudia S.** (2008). "Joint-working as a policy for reducing inequalities in access to information: developing culturally appropriate sex and relationships education for young Bangladeshis in London". *Sex education*, v. 8, n. 2, pp. 187-200.
https://doi.org/10.1080/14681810801981183

Foster, Elissa (2008). Commitment, communication, and contending with heteronormativity: an invitation to greater reflexivity in interpersonal research". *Southern communication journal*, v. 73, n. 1, pp. 84-101.
https://doi.org/10.1080/10417940701815683

Gavey, Nicola; **McPhillips, Kathryn**; **Doherty, Marion** (2001). "If it's not on, it's not on" - or is it? discursive constraints on women's condom use". *Gender & society*, v. 15, n. 6, pp. 917-934.
https://doi.org/10.1177/089124301015006008

Gunning, Jacqueline N.; **Cooke-Jackson, Angela**; **Rubinsky, Valerie** (2020). "Negotiating shame, silence, abstinence, and period sex: women's shift from harmful memorable messages about reproductive and sexual health". *American journal of sexuality education*, v. 15, n. 1, pp. 111-137.
https://doi.org/10.1080/15546128.2019.1669511

Gupta, Kristina; **Cacchioni, Thea** (2013). "Sexual improvement as if your health depends on it: an analysis of contemporary sex manuals". *Feminism & psychology*, v. 23, n. 4, pp. 442-458.
https://doi.org/10.1177/0959353513498070

Gupta, Antionette E.; **Zimmerman, Toni S.**; **Fruhauf, Christine A.** (2008). "Relationship advice in the top selling women's magazine *Cosmopolitan:* a content analysis". *Journal of couple & relationship therapy*, v. 7, n. 3, pp. 248-266.
https://doi.org/10.1080/15332690802237987

Haig, Thomas (2006). "Bareback sex: masculinity, silence, and the dilemmas of gay health". *Canadian journal of communication*, v. 31, n. 4.
https://doi.org/10.22230/cjc.2006v31n4a1699

Hall, Jeffrey A. (2016). "Interpreting social-sexual communication: relational framing theory and social-sexual communication, attraction, and intent". *Human communication research*, v. 42, n. 1, pp. 138-164.
https://doi.org/10.1111/hcre.12071

Hall, Jeffrey A.; **Xing, Chong**; **Brooks, Seth** (2015). "Accurately detecting flirting: error management theory, the traditional sexual script, and flirting base rate". *Communication research*, v. 42, n. 7, pp. 939-958.
https://doi.org/10.1177/0093650214534972

Harvey, John H.; **Wenzel, Amy**; **Sprecher, Susan** (eds). (2004). *The handbook of sexuality in close relationships*. Mahwah, NJ: Lawrence Erlbaum. ISBN: 978 0 80584 548 8

Henningsen, David-Dryden (2004). "Flirting with meaning: an examination of miscommunication in flirting interactions". *Sex roles*, v. 50, n. 7/8, pp. 481-489.
https://doi.org/10.1023/B:SERS.0000023068.49352.4b

Henningsen, David-Dryden; **Braz, Mary**; **Davies, Elaine** (2008). "Why do we flirt? Flirting motivations and sex differences in working and social contexts". *Journal of business communication*, v. 45, n. 4, pp. 483-502.
https://doi.org/10.1177/0021943608319390

Henningsen, David-Dryden; **Henningsen, Mary-Lynn**; **Valde, Kathleen S.** (2006). "Gender differences in perceptions of women's sexual interest during cross-sex interactions: an application and extension of cognitive valence theory". *Sex roles*, v. 54, n. 11-12, pp. 821-829.
https://doi.org/10.1007/s11199-006-9050-y

Henningsen, David-Dryden; **Kartch, Falon**; **Orr, Nancy**; **Brown, Amanda** (2009). "The perceptions of verbal and nonverbal flirting cues in cross-sex interactions". *Human communication*, v. 12, n. 4, pp. 371-381.
https://www.scribd.com/document/162697333/The-Perceptions-of-Verbal-and-Nonverbal-Flirting-Cues-in-Cross-Sex-Interactions

Heisler, Jennifer M. (2005). "Family communication about sex: parents and college-aged offspring recall discussion topics, satisfaction, and parental involvement". *The journal of family communication*, v. 5, n. 4, pp. 295-312.
https://doi.org/10.1207/s15327698jfc0504_4

Hertzog, Jodie L. (2008). "What about the gray area?: College women's reflections on the sex talk and abstinence". *Families in society*, v. 89, n. 2, pp. 312-322.
https://doi.org/10.1606/1044-3894.3747

Hetsroni, Amir (2008). "Dependency and adolescents' perceived usefulness of information on sexuality: A cross-cultural comparison of interpersonal sources, professional sources, and the mass media". *Communication reports*, v. 21, n. 1, pp. 14-32.
https://doi.org/10.1080/08934210802019330

Hintz, Elizabeth A. (2018). "The vulvar vernacular: dilemmas experienced and strategies recommended by women with chronic genital pain". *Health communication*, v. 34, n. 14, pp. 1721-1720.
https://doi.org/10.1080/10410236.2018.1517709

Hintz, Elizabeth A. (2019). "Disrupting sexual norms: An application of the critical interpersonal and family communication (CIFC) framework in the context of vulvodynia". *Journal of family communication*, v. 19, n. 2, pp. 110-125.
https://doi.org/10.1080/15267431.2019.1580196

Holman, Amanda; **Sillars, Alan** (2012). "Talk about hooking up: the influence of college student social networks on nonrelationship sex". *Health communication*, v. 27, n. 2, pp. 205-216.
https://doi.org/10.1080/10410236.2011.575540

Horan, Sean M. (2016). "Further understanding sexual communication: honesty, deception, safety, and risk". *Journal of social and personal relationships*, v. 33, n. 4, pp. 449-468.
https://doi.org/10.1177/0265407515578821

Johnson, Amber (2014). "Confessions of a video vixen: my autocritography of sexuality, desire, and memory". *Text and performance quarterly*, v. 34, n. 2, pp. 182-200.
https://doi.org/10.1080/10462937.2013.879991

Jones, Daniel N.; **Olderback, Sally G.** (2014). "The associations among dark personalities and sexual tactics across different scenarios". *Journal of interpersonal violence*, v. 29, n. 6, pp. 1050-1070.
https://doi.org/10.1177/0886260513506053

Jozkowski, Kristen N. (2016). "Why does 'rape' seem like a myth?". In: Manning, Jimmie; Noland, Carey M. (eds.). *Contemporary studies of sexuality & communication: theoretical and applied perspectives.* Dubuque: Kendall Hunt, pp. 239-261. ISBN: 978 1 46527 024 5

Jozkowski, Kristen N.; **Manning, Jimmie**; **Hunt, Mary** (2018). "Sexual consent in and out of the bedroom: disjunctive views of heterosexual college students". *Women's studies in communication*, v. 41, n. 2, pp. 117-139.
https://doi.org/10.1080/07491409.2018.1470121

Juárez, Fátima; **Castro-Martín, Teresa** (2006). "Safe sex versus safe love? Relationship context and condom use among male adolescents in the favelas of Recife, Brazil". *Archives of sexual behavior*, v. 35, n. 1, pp. 25-35.
https://doi.org/10.1007/s10508-006-8992-z

Kgafela, N. (2007). "Sexual actors or passive sexual gratifiers? Women lovers in Baralong Seboni's love poems". *NAWA: Journal of language and communication*, v. 1, n. 1, pp. 112-120.

Kirkman, Maggie; **Rosenthal, Doreen A.**; **Feldman, S. Shirley** (2005). "Being open with your mouth shut: the meaning of openness in family communication about sexuality". *Sex education*, v. 5, n. 1, pp. 49-66.
https://doi.org/10.1080/1468181042000301885

Knapp, Mark L.; **Daly, John A.** (2011). *The SAGE handbook of interpersonal communication*, 4th ed. Thousand Oaks: Sage. ISBN: 978 1 41297 474 5

Knobloch, Leanne K.; **Delany, Amy L.** (2012). "Themes of relational uncertainty and interference from partners in depression". *Health communication*, v. 27, n. 8, pp. 750-765.
https://psycnet.apa.org/doi/10.1080/10410236.2011.639293

Koelsch, Lori E. (2014). Sexual discourses and the absence of agency. *Women & language*, v. 37, n. 2, pp. 11-29.

Koelsch, Lori E.; **Brown, Amy L.**; **Boisen, Leah** (2012). "Bystander perceptions: implications for university sexual assault prevention programs". *Violence and victims*, v. 27, n. 4, pp. 563-579.
https://doi.org/10.1891/0886-6708.27.4.563

Kratzer, Jessica M. W.; **Aubrey, Jennifer-Stevens** (2016). "Is the actual ideal?: a content analysis of college students' descriptions of ideal and actual hookups". *Sexuality & culture*, v. 20, n. 2, pp. 236-254.
https://doi.org/10.1007/s12119-015-9318-x

La-France, Betty H. (2010a). "Predicting sexual satisfaction in interpersonal relationships". *Southern communication journal*, v. 75, n. 3, pp. 195-214.
https://doi.org/10.1080/10417940902787939

La-France, Betty H. (2010b). "What verbal and nonverbal communication cues lead to sex? An analysis of the traditional sexual script". *Communication quarterly*, v. 58, n. 3, pp. 297-318.
https://doi.org/10.1080/01463373.2010.503161

La-France, Betty H. (2020). "Sexual interactions (un)scripted: an exploration of consequential unscripted sexual interactions". *Communication quarterly*, v. 68, n. 4, pp. 355-374.
https://doi.org/10.1080/01463373.2020.1787478

La-France, Betty H.; **Henningsen, David D.**; **Oates, Aubrey**; **Shaw, Christina M.** (2009). "Social-sexual interactions? Meta-analyses of sex differences in perceptions of flirtatiousness, seductiveness, and promiscuousness". *Communication monographs*, v. 76, n. 3, pp. 263-285.
https://doi.org/10.1080/03637750903074701

Lannutti, Pamela J.; **Denes, Amanda** (2012). A kiss is just a kiss? Comparing perceptions related to female-female and female-male kissing in a college social situation. *Journal of bisexuality*, v. 12, n. 1, pp. 49-62.
https://doi.org/10.1080/15299716.2012.645716

Levine, Stephen B. (2003). "The nature of sexual desire: a clinician's perspective". *Archives of sexual behavior*, v. 32, n. 3, pp. 279-285.
https://doi.org/10.1023/A:1023421819465

Levine, Timothy R.; **Aune, Krystyna-Styrzyewski**; **Park, Hee-Sun** (2006). "Love styles and communication in relationships: partner preferences, initiation, and intensification". *Communication quarterly*, v. 54, n. 4, pp. 465-486.
https://doi.org/10.1080/01463370601036515

Levine, Timothy R.; **Mongeau, Paul A.** (2011). "Friends with benefits: A precarious negotiation". In Bruce, Michael; Stewart, Robert M. (eds.). *College sex-philosophy for everyone: philosophers with benefits.* Oxford: Wiley/Blackwell, pp. 91-102. ISBN: 978 1 44433 294 0

Lieser, Monica L.; **Tambling, Rachel B.**; **Bischof, Gary H.**; **Murry, Nikita** (2007). "Inclusion of sexuality in relationship education programs". *The family journal*, v. 15, n. 4, pp. 374-380.
https://doi.org/10.1177/1066480707304948

Liu, Min (2012). "Speaking the unspeakable: an exploratory study of college women's sex communication in Shanghai, China". *Asian journal of communication*, v. 22, n. 2, pp. 197-213.
https://doi.org/10.1080/01292986.2011.642396

Li, Yachao; **Samp, Jennifer A.** (2019). "Sexual relationship power, safer sexual communication, and condom use: A comparison of heterosexual young men and women". *Western journal of communication*, v. 83, n. 1, pp. 58-74.
https://doi.org/10.1080/10570314.2017.1398835

Lunceford, Brett (2008). "The walk of shame: a normative description". *ETC: a review of general semantics*, v. 64, n. 4, pp. 319-329.
https://www.jstor.org/stable/42578870

Lunceford, Brett (2009). "The body and the sacred in the digital age: thoughts on posthuman sexuality". *Theology & sexuality*, v. 15, n. 1, pp. 77-96.
https://doi.org/10.1558/tse.v15i1.77

Lunceford, Brett (2011). "The new pornographers: Legal and ethical considerations of sexting. In Drushel, Bruce E.; German, Kathleen (eds.). *The ethics of emerging media: Information, social norms, and new media technology*. New York: Continuum International Publishing Group, pp. 99-118. ISBN: 978 1 44111 836 3

Lunceford, Brett (2013a). "Telepresence and the ethics of digital cheating". *Explorations in media ecology*, v. 12, n. 1-2, pp. 7-26.
https://doi.org/10.1386/eme.12.1-2.7_1

Lunceford, Brett (2013b). "The real consequences of imaginary sex acts". *ETC.: a review of general semantics*, v. 70, n. 4, pp. 405-433.
https://www.researchgate.net/publication/261707609_The_Real_Consequences_of_Imaginary_Sex_Acts

MacLennan, Janet; **Manning, Jimmie**; **Noland, Carey** (2010). "Introduction". In: Noland, Carey; Manning, Jimmie; MacLennan, Janet (eds.). *Case studies of communication about sex.* Newcastle: Cambridge Scholars, pp. xi-xxi. ISBN: 978 1 44382 875 8

Mahdavi, Pardis (2009). *Passionate uprising: Iran's sexual revolution*. Stanford: Stanford University: ISBN: 978 0 80475 856 7

Mandarelli, Gabrielle; **Zangaro, Stefania**; **Raja, Michelle**; **Azzoni, Antonella**; **Tatarelli, Roberto**; **Ferracuti, Stefano** (2012). "Competence to consent to sexual activity in bipolar disorder and schizophrenic spectrum disorders". *Archives of sexual behavior*, v. 41, n. 2, pp. 507-515.
https://doi.org/10.1007/s10508-011-9840-3

Manning, Jimmie (2011). "Masculinities in dating relationships: Reality and representation at the intersection of race, class, and sexual orientation". In: Watson, Elmwood; Shaw, Marc E. (eds.). *Performing American masculinities: The 21st century man in popular culture.* Bloomington: Indiana University, pp. 167-191. ISBN: 978 0 25322 270 1

Manning, Jimmie (2013). "Interpretive theorizing in the seductive world of sexuality and interpersonal communication: getting guerilla with studies of sexting and purity rings". *International journal of communication*, v. 7, pp. 2507-2520.
https://ijoc.org/index.php/ijoc/article/download/2250/1023

Manning, Jimmie (2014a). "Coming out conversations and gay/bisexual men's sexual health: a constitutive model study". In: Harvey, Vickie L.; Housel, Teresa-Heinz (eds.). *Health care disparities and the LGBT population.* Lanham: Lexington Books, pp. 27-54. ISBN: 978 1 49853 605 9

Manning, Jimmie (2014b). "Communication and healthy sexual practices: Toward a holistic communicology of sexuality". In: Eaves, Michael H. (ed.). *Applications in health communication: emerging trends.* Dubuque: Kendall Hunt, pp. 263-286. ISBN: 978 1 46523 787 3

Manning, Jimmie (2014c). "A constitutive approach to interpersonal communication studies". *Communication studies*, v. 65, n. 4, pp. 432-440.
https://doi.org/10.1080/10510974.2014.927294

Manning, Jimmie (2014d). "Exploring family discourses about purity pledges: connecting relationships and popular culture". *Qualitative research reports in communication*, v. 15, n. 1, pp. 92-99.
https://doi.org/10.1080/17459435.2014.955597

Manning, Jimmie (2015a). "Communicating sexual identities: A typology of coming out". *Sexuality & culture*, n. 1, pp. 122-138.
https://doi.org/10.1007/s12119-014-9251-4

Manning, Jimmie (2015b). "Ipsedixitism, ipseity, and ipsilateral identity: The fear of finding ourselves in the fissures between phishing and catfish". In: Herbig, Arthur; Hermann, Andrew; Tyma, Adam (eds.). *Beyond new media: discourse and critique in a polymediated age.* Lanham: Lexington Books, pp. 83-107. ISBN: 978 1 49850 737 0

Manning, Jimmie (2015c). "Paradoxes of (im)purity: affirming heteronormativity and queering heterosexuality in family discourses of purity pledges". *Women's studies in communication*, v. 38, n. 1, pp. 99-117.
https://doi.org/10.1080/07491409.2014.954687

Manning, Jimmie (2015d). "Positive and negative communicative behaviors in coming-out conversations". *Journal of homosexuality*, v. 62, n. 1, pp. 67-97.
https://doi.org/10.1080/00918369.2014.957127

Manning, Jimmie (2017). "Examining health and relationship beliefs in family discourses about purity pledges: gender, faith values, and the communicative constitution of reality". *Western journal of communication*, v. 81, n. 1, pp. 87-104.
https://doi.org/10.1080/10570314.2016.1227082

Manning, Jimmie (2020). "Queering family communication". In: Soliz, Jordan; Warner-Colaner, Colleen (eds.). *Navigating relationships in the modern family: communication, identity, and difference.* New York: Peter Lang, pp. 69-95. ISBN: 978 1 43316 237 4

Manning, Jimmie; **Adams, Tony E.** (in press). "Queer theory: Troubling interpersonal expectations of sex, gender, and sexuality". In: Braithwaite, Dawn; Schrodt, Paul (eds.). *Engaging theories in interpersonal communication: Multiple perspectives* (3rd ed.). New York: Routledge.

Manning, Jimmie; **Adams, Tony E.**; **Atay, Ahmet** (2020). "Gay, *Grey*, gray, and play: fifty shades queer. In: Kratzer, Jessica M. W. (ed.). *Communication in kink: understanding the influence of the Fifty Shades of Grey phenomenon*. Lanham: Lexington Books, pp. 217-228. ISBN: 978 1 49858 550 7

Manning, Jimmie; **Asante, Godfried**; **Huerta-Moreno, Lydia**; **Johnson, Rebecca**; **LeMaster, Benny**; **Li, Yachao**; **Rudnick, Justin J.**; **Stern, Danielle M.**; **Young, Stephanie** (2020). "Queering communication studies: a *Journal of Applied Communication Research* forum". *Journal of applied communication research*, v. 48, n. 4, pp. 413-437.
https://doi.org/10.1080/00909882.2020.1789197

Manning, Jimmie; **Stern, Danielle M.** (2016). "Heteronormative bodies, queer futures: Toward a theory of interpersonal panopticism". *Information, communication & society*, v. 21, n. 2, pp. 208-223.
https://doi.org/10.1080/1369118X.2016.1271901

Manning, Jimmie; **Kunkel, Adrianne** (2014a). "Making meaning of meaning-making research: using qualitative research methods for studies of social and personal relationships". *Journal of social and personal relationships*, v. 31, n. 4, pp. 433-441.
https://doi.org/10.1177/0265407514525890

Manning, Jimmie; **Kunkel, Adrianne** (2014b). *Researching interpersonal relationships: qualitative methods, studies and analysis*. Thousand Oaks: Sage. ISBN: 978 1 45220 390 4

Miller, Michael J.; **Denes, Amanda**; **Diaz, Brianna**; **Buck, Ross** (2014). "Attachment style predicts jealous reactions to viewing touch between a romantic partner and close friend: Implications for internet social communication". *Journal of nonverbal behavior*, v. 38, n. 4, pp. 451-476.
https://doi.org/10.1007/s10919-014-0196-y

Mongeau, Paul A.; **Jacobsen, Janet**; **Donnerstein, Carolyn** (2007). "Defining dates and first date goals: generalizing from undergraduates to single adults". *Communication research*, v. 34, n. 5, pp. 526-547.
https://doi.org/10.1177/0093650207305235

Mongeau, Paul A.; **Knight, Kendra**; **Williams, Jade**; **Eden, Jennifer**; **Shaw, Christina** (2013). "Identifying and explicating variation among friends with benefits relationships". *Journal of sex research*, v. 50, n. 1, pp. 37-47.
https://doi.org/10.1080/00224499.2011.623797

Mongeau, Paul A.; **Morr-Serewicz, Mary-Claire**; **Ficara-Therrien, Lona** (2004). "Goals for cross-sex first dates: identification, measurement, and the influence of contextual factors". *Communication monographs*, v. 71, n. 2, pp. 121-147.
https://doi.org/10.1080/0363775042331302514

Morr-Serewicz, Mary-Claire; **Mongeau, Paul A.** (2004). "First-date expectations, the impact of sex of initiator, alcohol consumption, and relationship type. *Communication research*, v. 31, n. 1, pp. 3-35.
https://doi.org/10.1177/0093650203260202

Noland, Carey M. (2006). "Listening to the sound of silence: Gender roles and communication about sex in Puerto Rico". *Sex roles*, v. 55, n. 5-6, pp. 283-294.
https://doi.org/10/1007/s11199-006-9083-2

Noland, Carey M. (2008). "Macho men don't communicate: the role of communication in HIV prevention". *The journal of men's studies*, v. 16, n. 1, pp. 18-31.
https://doi.org/10.3149/jms.1601.18

Noland, Carey M. (2010). *Sex talk: The role of communication in intimate relationships.* Santa Barbara: Praeger. ISBN: 978 0 31337 968 0

Noland, Carey M.; **MacLennan, J .** (2006). "Perplexing questions about culture, gender, and sex research: why isn't awareness enough?". *Texas speech communication journal*, v. 30, n. 2, pp. 158-169.

Nyanzi, Stella; **Nyanzi-Wokholi, Barbara**; **Kalina, Bessie** (2009). "Male promiscuity: the negotiation of masculinities by motorbike taxi-riders in Masaka, Uganda". *Men and masculinities*, v. 12, n. 1, pp. 73-89.
https://doi.org/10.1177/1097184X07309503

O'Higgins, Siobhán; **Gabhainn, Saoirse-Nic** (2010). "Youth participation in setting the agenda: learning outcomes for sex education in Ireland". *Sex education*, v. 10, n. 4, pp. 387-403.
https://doi.org/10.1080/14681811.2010.515096

Parker, Kimberly A.; **Ivanov, Bobi** (2013). "Why not communicate? Young women's reflection on their lack of communication with sexual partners regarding sex and contraception". *International journal of health, wellness, and society*, v. 2, n. 4, pp. 93-109.
https://doi.org/10.18848/2156-8960/CGP/v02i04/41023

Payne, Robert (2014). "Frictionless sharing and digital promiscuity". *Communication and critical/cultural studies*, v. 11, n. 2, pp. 85-102.
https://doi.org/10.1080/14791420.2013.873942

Peck, Brittnie; **Manning, Jimmie**; **Tri, Andrew**; **Skrzypczynski, Daria**; **Summers, Morgan**; **Grubb, Kayleigh** (2016). "What do people mean when they say they had sex? Connecting communication and behavior. In: Manning, Jimmie; Noland, Carey M. (eds.). *Contemporary studies of sexuality & communication: theoretical and applied perspectives.* Dubuque: Kendall Hunt, pp. 3-14. ISBN: 978 1 46527 024 5

Peter, Jochen; **Valkenburg, Patti M.** (2007). "Who looks for casual dates on the internet? A test of the compensation and the recreation hypotheses". *New media & society*, v. 9, n. 3, pp. 455-474.
https://doi.org/10.1177/1461444807076975

Raffaelli, Marcela; **Green, Stephanie** (2003). "Parent-adolescent communication about sex: retrospective reports by Latino college students". *Journal of marriage and family*, v. 65, n. 2, pp. 474-481.
https://doi.org/10.1111/j.1741-3737.2003.00474.x

Ren, Pega (2007). "Coping with premature ejaculation: how to overcome PE, please your partner & have great sex". *Archives of sexual behavior*, v. 36, pp. 475-476.
https://doi.org/10.1007/s10508-007-9173-4

Rhucharoenpornpanich, Orratai; **Chamratrithirong, Aphichat**; **Fongkaew, Warunee**; **Miller, Brenda A.**; **Cupp, Pamela K.**; **Rosati, Michael J.**; **Byrnes, Hilary F.**; **Atwood, Katharine A.**; **Chookhare, Warunee** (2012). "Parent-teen communication about sex in urban Thai families". *Journal of health communication*, v. 17, n. 4, pp. 380-396.
https://doi.org/10.1080/10810730.2011.626668

Rinaldi-Miles, Anna; **Quick, Brian**; **LaVoie, Nicole** (2014). "An examination of the principles of influence on condom use decision making during casual sex encounters". *Health communication*, v. 29, n. 6, pp. 531-541.
https://doi.org/10.1080/10410236.2013.765295

Ross, Michael W.; **Rosser, B. R. Simon**; **McCurdy, Sheryl**; **Feldman, Jamie** (2007). "The advantages and limitations of seeking sex online: a comparison of reasons given for online and offline sexual liasons by men who have sex with men". *Journal of sex research*, v. 44, n. 1, pp. 59-71.
https://doi.org/10.1080/00224490709336793

Rubinsky, Valerie (2018). "Sometimes it's easier to type things than to say them: technology in BDSM sexual partner communication". *Sexuality & culture*, v. 22, n. 4, pp. 1412-1431.
https://doi.org/10/1007/s12119-018-9534-2

Rubinsky, Valerie (2021). "Sources and strategies for managing sexual conflict in diverse relationships". *Sexuality & culture*.
https://doi.org/10.1007/s12119-020-09800-x

Simpson, Paul (2012). "Perils, precariousness and pleasures: middle-aged gay men negotiating urban heterospaces". *Sociological research online*, v. 17, n. 3, pp. 124-133.
https://doi.org/10.5153/sro.2665

Smahel, David; **Wright, Michelle**; **Cernikova, Martina** (2014). "Classification of online problematic situations in the context of youths' development". *Communications*, v. 39, n. 3, pp. 233-260.
https://doi.org/10.1515/commun-2014-0111

Sprecher, Susan; **Cate, Rodney M.** (2004). "Sexual satisfaction and sexual expression as predictors of relationship satisfaction and stability". In: Harvey, John H; Wenzel, Amy; Sprecher, Susan (eds.). *The handbook of sexuality in close relationships*. Mahwah: Lawrence Erlbaum, pp. 235-256. ISBN: 978 0 80585 668 2

Sprecher, Susan; **Christopher, F. Scott**; **Cate, Rodney M.** (2006). "Sexuality in close relationships". In: Vangelisti, Anita L.; Perlman, Daniel (eds.). *The Cambridge handbook of personal relationships*. New York: Cambridge University, pp. 463-482. ISBN: 978 1 107571204

Sprecher, Susan; **Harris, Gardenia**; **Meyers, Adena** (2008). "Perceptions of sources of sex education and targets of sex communication: sociodemographic and cohort effects". *Journal of sex research*, v. 45, n. 1, pp. 17-26.
https://doi.org/10.1080/00224490701629522

Stamp, Glen H. (1999). "A qualitatively constructed interpersonal communication model: A grounded theory analysis". *Human communication research*, v. 25, n. 4, pp. 531-547.
https://doi.org/10.1111/j.1468-2958.1999.tb00460.x

Štulhofer, Alexsandar; **Buško, Vesna**; **Brouillard, Pamela** (2010). "Development and bicultural validation of the new sexual satisfaction scale". *Journal of sex research*, v. 47, n. 4, pp. 257-268.
https://doi.org/10.1080/00224490903100561

Theiss, Jennifer; **Estlein, Roi** (2014). "Antecedents and consequences of the perceived threat of sexual communication: a test of the relational turbulence model". *Western journal of communication*, v. 78, n. 4, pp. 404-425.
https://doi.org/10.1080/10570314.2013.845794

Van-der-Stege, Heleen A.; **Van-Staa, AnneLoes**; **Hilberink, Sander R.**; **Visser, Adriaan Ph.** (2010). "Using the new board game SeCZ TaLK to stimulate the communication on sexual health for adolescents with chronic conditions". *Patient education and counseling*, v. 81, n. 3, pp. 324-331.
https://doi.org/10.1016/j.pec.2010.09.011

Widman, Laura; **Golin, Carol E.**; **Kamke, Kristyn**; **Burnette, Jeni L.**; **Prinstein, Mitchell J.** (2018). "Sexual assertiveness skills and sexual decision-making in adolescent girls: randomized controlled trial of an online program". *American journal of public health*, v. 108, n. 1, pp. 96-102.
https://ajph.aphapublications.org/doi/10.2105/AJPH.2017.304106

Woodward, Anne J.; **Findlay, Bruce M.**; **Moore, Susan M.** (2009). "Peak and mystical experiences in intimate relationships". *Journal of social and personal relationships*, v. 26, n. 4, pp. 429-442.
https://doi.org/10.1177/0265407509339994

Wright, Paul J. (2009). "Father-child sexual communication in the United States: a review and synthesis". *Journal of family communication*, v. 9, n. 4, pp. 233-250.
https://doi.org/10.1080/15267430903221880

Wright, Paul J.; **Randall, Ashley K.**; **Hayes, Javette-Grace** (2012). "Predicting the condom assertiveness of collegiate females in the United States from the expanded health belief model". *International journal of sexual health*, v. 24, n. 2, pp. 127-153.
https://doi.org/10.1080/19317611.2012.661396

Wyckoff, Sarah C.; **Miller, Kim S.**; **Forehand, Rex**; **Bau, J. J.**; **Fasula, Amy**; **Long, Nicholas**; **Armistead, Lisa** (2008). "Patterns of sexuality communication between preadolescents and their mothers and fathers". *Journal of child and family studies*, v. 17, n. 5, pp. 649-662.
https://doi/org/10.1007/s10826-007-9179-5

Yeo, Tien-Ee-Dominic; **Fung, Tsz-Hin** (2016). "Between 0 and 1: safer sex and condom use among young gay men in Hong Kong". *Culture, health & sexuality*, v. 18, n. 3, pp. 294-307.
https://doi.org/10.1080/13691058.2015.1080298

Yeo, Tien-Ee-Dominic; **Chu, Tsz-Hang** (2017). "Sharing sex secrets on Facebook: a content analysis of youth peer communication and advice exchange on social media about sexual health and intimate relations". *Journal of health communication*, v. 22, n. 9, pp. 753-762.
https://doi.org/10.1080/10810730.2017.1347217

Yep, Gust A. (2003). "The violence of heteronormativity in communication studies: notes on injury, healing and queer world-making". *Journal of homosexuality*, v. 45, n. 2-4, pp. 11-59.
https://doi.org/10.1300/J082v45n02_02

Percepción de las personas con discapacidad sobre su representación en los medios de comunicación

The perception of people with disabilities regarding their portrayal in the media

Tamara Vázquez-Barrio; María Sánchez-Valle; Mónica Viñarás-Abad

Cómo citar este artículo:

Vázquez-Barrio, Tamara; **Sánchez-Valle, María**; **Viñarás-Abad, Mónica** (2021). "Percepción de las personas con discapacidad sobre su representación en los medios de comunicación". *Profesional de la información*, v. 30, n. 1, e300106.

https://doi.org/10.3145/epi.2021.ene.06

Artículo recibido el 08-05-2020
Aceptación definitiva: 06-10-2020

Tamara Vázquez-Barrio
https://orcid.org/0000-0003-2789-8554

Universidad CEU San Pablo
Facultad de Humanidades y Ciencias de la Comunicación
Paseo Juan XXIII, 3
20840 Madrid, España
tamarav@ceu.es

María Sánchez-Valle
https://orcid.org/0000-0003-1497-2938

Universidad CEU San Pablo
Facultad de Humanidades y Ciencias de la Información
Pº de Juan XXIII, 3
28040 Madrid, España
mvalle.fhum@ceu.es

Mónica Viñarás-Abad
https://orcid.org/0000-0001-8792-5927

Universidad Complutense de Madrid
Facultad de Ciencias de la Información
Av. Complutense, 3
28040 Madrid, España
mvinaras@ucm.es

Resumen

Existe abundante bibliografía sobre el encuadre de las noticias relacionadas con la discapacidad, pero no sobre las percepciones que tienen las personas con discapacidad sobre cómo se las presenta en los medios de comunicación. En este artículo se difunden los resultados de una investigación en la que se constituyeron tres grupos de discusión con personas con discapacidad en octubre de 2019. Los objetivos eran conocer los frames mediáticos percibidos, las causas que los explican y las propuestas para que los medios aborden esta cuestión de manera inclusiva. Los resultados muestran que existe acuerdo en que la cobertura periodística se ha incrementado y que las personas con discapacidad han ganado protagonismo informativo. Afirman que han alcanzado el objetivo de la visibilidad, pero consideran que es necesario mejorar el tratamiento mediático para alcanzar la normalización. Perciben que la información sobre la discapacidad se caracteriza por ser sesgada, sensacionalista, estereotipada, despersonalizada y por presentar a las personas con discapacidad como un colectivo homogéneo. Las soluciones que proponen consisten en incorporar la discapacidad en la agenda mediática de manera plural, diversa y transversal; recordar que es una condición de la persona, pero no es lo que les define, y consideran imprescindible que los medios utilicen un lenguaje adecuado, que evite la discriminación y el paternalismo, pero también los eufemismos. Según los participantes en la investigación, la formación específica de los periodistas que cubren estas noticias sería una buena forma de conseguir que la información esté más ajustada a la realidad de los hechos. Con ello, los medios cumplirían una importante función social ayudando a normalizar y naturalizar la discapacidad entre los ciudadanos.

Palabras clave

Discapacidad; Frames; Personas con discapacidad; Percepción; Estereotipos; Discriminación; Diversidad; Inclusión; Tratamiento informativo; Medios; Cobertura periodística.

Abstract

An extensive literature has been dedicated to the framing of disability-related news but not to the perceptions of people with disabilities regarding their portrayal in the media. This article presents the results of a research study in which three discussion groups were held with people with disabilities in October 2019. The objectives were to gain knowledge regarding the perceived media frames and the causes that explain them and suggest proposals for the media to address disability in an inclusive manner. The results reveal a consensus regarding the fact that journalistic coverage has increased and that people with disabilities have gained prominence in the news. They state that they have achieved the objective of visibility but consider it necessary to improve media treatment to achieve normalization. They perceive the information regarding disability as biased, sensationalist, stereotyped, depersonalized, and presented in a way that portrays people with disabilities as a homogeneous group. The solutions they advocate consist of incorporating disability into the media agenda in a way that is pluralistic, diverse, and transversal, while remembering that a disability is a condition that a person has, not what defines them. They also consider it essential for the media to use appropriate language that avoids discrimination and paternalism, as well as euphemisms. Specific training of journalists who cover such news would be a good approach according to the participants in this study, to orient the information more toward the reality of the facts and thereby enable the media to carry out an important social function in helping to normalize disability among citizens and make it part of society.

Keywords

Disability; Frames; Disabled persons; Disabled people; Stereotypes; Perceptions; Discrimination; Diversity; Inclusion; News treatment; Media; Coverage.

Financiación

Este artículo es un resultado del *Programa Nuevos Escenarios de Vulnerabilidad Digital: Alfabetización Mediática para una sociedad inclusiva Provuldig2-CM*, Ref.: H2019/HUM-5775 cofinanciado por la *Comunidad de Madrid* y el *Fondo Social Europeo*.

Agradecimientos

A *Dircom* por poner en marcha el proyecto *Inclucom* y a las entidades colaboradoras que participaron en dicho proyecto: *Comité Español de Representantes de Personas con Discapacidad* (*Cermi*), *Fundación ONCE* y *Down España*. Gracias también a todos los participantes en los grupos de discusión de esta investigación

1. Introducción

Los estudios desde la academia y el sector profesional coinciden en la tarea que desempeñan los medios de comunicación para la normalización de la discapacidad en la sociedad. Los medios de comunicación determinan el discurso y las representaciones sociales en la opinión pública y, por lo tanto, su papel para conseguir visibilidad y sensibilización se convierte en fundamental (**Vega-Fuente**; **Martín**, 1999; **Perujo-Serrano**, 2002; **Orero**, 2017; **Álvarez-Villa**; **Mercado-Sáez**, 2015). Son estos un instrumento de información, divulgación y generación de opinión que juega un papel preponderante en el proceso de integración de las personas con discapacidad, siendo muy similar al que se ha registrado en otros segmentos sociales (*Fundación A La Par*, 2018).

Esta influencia de los medios de comunicación en la formación de la opinión pública actúa al menos en dos niveles. El primero, en la selección de las noticias que aparecen en la prensa, tal y como estudia la teoría de la *agenda setting*, y el segundo, en el marco desde el que se abordan esas informaciones. En este sentido, para explicar cuál es el tratamiento informativo que reciben las noticias sobre la discapacidad en España, resulta útil recurrir a la teoría del *framing* como referencia sobre la manera en la que se elabora la opinión pública a partir de la información recibida a través de los medios de comunicación. De acuerdo con este planteamiento, los marcos o *frames* se entienden como las estructuras organizativas del mundo social que proporcionan sentido a los hechos sociales (**Bouza**, 1998). Parte de la premisa de que el proceso de construcción de significados es mediado y se inicia cuando los actores sociales trasladan su mensaje y enfoque a los medios de comunicación, estos lo proponen a los ciudadanos y, por último, son ellos los que realizan una interpretación del contenido.

El tratamiento informativo de la discapacidad es un tema que ha sido tratado por la bibliografía científica y por informes de asociaciones e instituciones (*Fundación ONCE*, 2010; *Cermi*, 2011; *Fundación A La Par*, 2018). No obstante, en el análisis de las informaciones publicadas en los medios se manifiesta que los periodistas no disponen de referencias que les indiquen cómo tratar esos temas, situación inquietante si tenemos en cuenta que la prensa tiene un papel decisivo en la transmisión de valores de representatividad de la discapacidad (**Mercado-Sáez**; **Álvarez-Villa**, 2012).

El tratamiento de la discapacidad en los medios de comunicación ha atravesado diferentes etapas. De forma sintética, a lo largo del siglo XX se pasó de una fase compasiva o filantrópica a la del reconocimiento de derechos de las personas con discapacidad, que dio paso a una etapa de la integración laboral y social (Juan-Antonio Ledesma en **Soto-Rosales**, 2015). La declaración del 2003 como Año Europeo de la Discapacidad fue el punto de partida para iniciativas que trataban de mejorar la visibilidad de las personas con discapacidad. Es en ese año cuando comienza la etapa de la igualdad (**Labio-Bernal**, 2006; Juan-Antonio Ledesma en **Soto-Rosales**, 2015).

A pesar de que se ha avanzado en el modo en el que los medios de comunicación informan sobre la discapacidad, existe preocupación entre este colectivo por el tipo de noticias y por los marcos desde los que se abordan. La falta de adecuación a la realidad, el exceso de estereotipación y superficialidad son algunos de los rasgos que provocan malestar y conflicto (**Rius-Sanchis**; **Solves-Almela**, 2010; **Sánchez-Valle**; **Vázquez-Barrio**; **Viñarás-Abad**, 2019).

Algunas aportaciones sobre este asunto centran la atención en el tratamiento que reciben las personas con discapacidad en los medios de comunicación (**Soto-Rosales**, 2015) ya sea en el análisis de las informaciones que aparecen en los medios escritos (**Rius-Sanchis**; **Solves-Almela**, 2010; **Mercado-Sáez**; **Álvarez-Villa**, 2012; **Holton**; **Farell**; **Fudge**, 2014; **Fraser**; **Llewellyn**, 2015) o audiovisuales (**Kim**; **Lee**; **Oh**, 2017; *Fundación ONCE*, 2010). Otros estudios se dirigen al análisis de sectores concretos como el del deporte (**Rius-Sanchis**; **Solves-Almela**, 2010; **Mercado-Sáez**; **Álvarez-Villa**, 2012) o atienden a las peculiaridades de discapacidades específicas (**Holton**; **Farell**; **Fudge**, 2014; **Fraser**; **Llewellyn**, 2015).

En la presentación de la discapacidad se encuentran perspectivas inadecuadas, aquellas que se realizan a partir de los aspectos negativos o limitativos, aludiendo a situaciones y escenarios principalmente de marginación (instituciones, asistenciales, hospitales, etc.) y con un tratamiento estereotipado (**Mercado-Sáez**; **Álvarez-Villa**, 2012). La utilización de clichés es una constante que reflejan diferentes informes sobre el tema como el de la *Fundación ONCE* (2010), que tras examinar la imagen que ofrecen los medios audiovisuales de la discapacidad concluye que todos los medios –radio, televisión, cine–, incluso la publicidad, muestran clichés asociados, por ejemplo, al síndrome de Down o a la silla de ruedas.

En relación con el tratamiento que reciben los deportes paralímpicos, es frecuente encontrar una representación desde un enfoque victimista, subrayando la función paternalista sobre la integradora, así como la transformación de un relato propiamente noticioso a novelesco e incluso épico, la personalización a través de historias de vida y la implicación afectiva del periodista que convierten a los deportistas paralímpicos en “superhéroes” (**Rius-Sanchis**; **Solves-Almela**, 2010). Por su parte, **Kim**, **Lee** y **Oh** (2017), tras analizar las transmisiones en televisión que cubrieron los eventos paralímpicos entre 1988 y 2012, pusieron de manifiesto que destacaban los temas optimistas, los atletas con discapacidad fueron las fuentes de información más frecuentemente citadas y coinciden con los autores anteriores en que el encuadre episódico era el estilo más empleado.

En relación con el autismo, **Holton**, **Farell** y **Fudge** (2014) encuentran señales estigmatizantes en el tratamiento de las noticias relacionadas con este trastorno y sugieren que los periodistas pueden estar creando un espacio amenazante para el autismo, particularmente en la utilización de marcos que perpetúan señales estereotipadas en más de dos tercios de las noticias. Por su parte, **Fraser** y **Llewellyn** (2015) analizaron las informaciones de los principales periódicos australianos entre 2004 y 2008, y encontraron que la prensa crea percepciones que niegan el papel de las personas con discapacidad como padres, especialmente en las que tienen una limitación intelectual, y señalan la necesidad de que exista un cambio, en línea con la *Convención de las Naciones Unidas sobre los Derechos de personas con discapacidad* de 2006.

Resultan muy esclarecedores los hallazgos de **Soto-Rosales** (2015) sobre las temáticas y marcos en el tratamiento de la discapacidad. El autor detectó que los temas que se abordaban en los medios eran los que tenían que ver con

- tecnología y recursos,
- violencia,
- problemas,
- causas y consecuencias de la discapacidad,
- artes y cuestiones de carácter educativo,
- mercado laboral,
- deportes,
- cuestiones de tipo familiar,
- sucesos,
- soluciones a la discapacidad,
- accesibilidad,
- historias de la vida, y
- sociedad inclusiva.

En lo relativo al *framing*, se manifiesta una tendencia a utilizar titulares llamativos e incluso sensacionalistas, recurriendo a los tintes emocionales con el objetivo de conmover y, en otras ocasiones, convirtiendo a la persona con discapacidad en una víctima. En cuanto al plano desde el que se trata la información, suele ser descriptivo o explicativo y, en un número menor de casos, intenta crear conciencia social. Igual que en otros estudios, se incide en la persistencia de imágenes estereotipadas y de mitos. No obstante, el autor considera esperanzador que una gran mayoría de las informaciones empleen un tono realista, no oculten las dificultades en la vida cotidiana de las personas con discapacidad, planteen soluciones y se aborden desde la óptica de la normalización.

En esta misma línea y referido a un estudio sobre los medios de comunicación valencianos, **Rius-Sanchis** y **Solves-Almela** (2012) concluyen que se han afianzado algunas de las tendencias positivas que habían encontrado en investigaciones anteriores. Un ejemplo es la presencia de la discapacidad como ítem noticioso transversal, lo que propicia mayor visibilidad. No se recluyen las noticias sobre discapacidad a las páginas finales de los diarios, aumentan las referencias a las soluciones y se aminoran las alusiones a los problemas. Desaparecen las mediatizaciones venales, así como la apelación a la piedad y la conmiseración y se nota un esfuerzo por no dañar la identidad de las personas con discapacidad protagonistas de las informaciones.

Atendiendo a la situación descrita, no resulta sorprendente que la queja más frecuente de las personas con discapacidad tenga que ver con la presentación de elementos amarillistas, a través de informaciones relacionadas con la crónica negra, que intentan apelar a aspectos emocionales y que aluden a la discapacidad como rasgo que aporta dramatismo al relato. A lo que añaden la inclusión de los

> "elementos que despiertan el morbo e incrementan además la tensión narrativa del hecho" (**Labio-Bernal**, 2006, p. 39) .

y la repetición de símbolos que no representan al conjunto de las personas con discapacidad como por ejemplo la utilización de la silla de ruedas (*Fundación ONCE*, 2010; **Labio-Bernal**, 2006).

Respecto al enfoque, las propuestas van dirigidas a la necesidad de potenciar en los medios a las personas con discapacidad (**Zalbidea-Bengoa** *et al.*, 2011). Entre los planteamientos para conseguir la normalización se encuentra evitar los *frames* condescendientes o humillantes, los clichés, el enfoque victimista, el leguaje estigmatizante y abordar la información dentro de su contexto (**Labio-Bernal**, 2006). En definitiva, ofrecer una información normalizadora y accesible, mostrando el lado positivo de la discapacidad (**Rius-Sanchis**; **Solves-Almela**, 2010; *Cermi*, 2011; *Observatorio Estatal de la Discapacidad*, 2018; **Peñas**; **Hernández**, 2019), unido a crear una nueva actitud abierta e inclusiva, evitando eclipsar a la persona detrás de su discapacidad, sin equiparar discapacidad y enfermedad, evitando el sensacionalismo, y apostando por la inclusión desde la riqueza de la diversidad (*Fundación A La Par*, 2018) y su normalización en la sociedad (**Sánchez-Valle**; **Vázquez-Barrio**; **Viñarás-Abad**, 2019).

En este sentido, *Cermi* (2011) enfatiza que los medios deben adoptar una nueva actitud abierta e inclusiva, que se justifica en que las personas con discapacidad son parte de la sociedad y, por tanto, las noticias deben evitar connotaciones que perpetúen imágenes negativas, deben contextualizar la información para facilitar una imagen más real, utilizar un lenguaje correcto y conocer la propia diversidad que hay dentro de la discapacidad. **Peñas** y **Hernández** (2019) añaden a estas recomendaciones dar voz a los protagonistas y ofrecer una imagen dinámica y activa.

Tras esta revisión se observa que los estudiosos sobre este tema se han centrado en el análisis del encuadre de las noticias relacionadas con la discapacidad, pero no en las percepciones de este colectivo sobre cómo se les presenta en los medios de comunicación. Es este artículo se reflejan los *frames* percibidos por las personas con discapacidad y sus propuestas sobre cuál sería el marco adecuado para abordar la discapacidad en los medios de comunicación.

2. Metodología

En 2005 **Benavides-Delgado** (2005, p. 91) indicaba que

> "el investigador no puede limitarse a observar lo que los medios dicen de la discapacidad, sino la forma como los discapacitados [sic.] se comprenden o se ven reflejados en aquéllos".

Esta investigación persigue conocer la percepción de las personas con discapacidad sobre la representación que se hace de ellas y de la discapacidad en general, en los medios de comunicación.

Además de este fin último, se establecen los siguientes objetivos secundarios:

1. Detectar los *frames* sobre la discapacidad percibidos por las personas con discapacidad.
2. Explorar las causas de los encuadres mediáticos prevalentes.
3. Conocer las propuestas de actuación para mejorar la información sobre la discapacidad, porque la hipótesis, de acuerdo con los estudios previos (**Perujo-Serrano**, 2002; **Díaz-Aledo**, 2007; **Fernández-Cid-Enríquez**, 2010; **Soto-Rosales**, 2015) y con las guías que han elaborado varias organizaciones (*Fundación ONCE*, 2010; *Cermi*, 2011; *Fundación A La Par*, 2010), es que la información sobre la discapacidad es insuficiente, sensacionalista, está muy estereotipada y utiliza un lenguaje inadecuado.

Las preguntas de investigación de las que parte este estudio son las siguientes:

1. ¿La discapacidad recibe atención mediática suficiente?
2. ¿Qué temas y mensajes prevalecen en las noticias sobre la discapacidad?
3. ¿Qué imagen se proyecta de las personas con discapacidad?
4. ¿Se emplea el lenguaje adecuado? ¿Se utilizan términos discriminatorios? ¿Y eufemismos?
5. ¿Cómo influye la imagen que ofrecen los medios de comunicación en las personas con discapacidad?
6. En el supuesto de que la información sea inadecuada, ¿cuáles son las causas y cuáles las soluciones para un tratamiento informativo inclusivo?

Para alcanzar estos objetivos y dar respuesta a las preguntas de investigación se ha utilizado una metodología cualitativa. El instrumento para la recogida de datos ha sido el grupo de discusión. **Kruger** define el grupo de discusión como

> "una conversación cuidadosamente planteada, diseñada para obtener información de un área definida de interés, en un ambiente permisivo, no directivo [...]. Los miembros del grupo se influyen mutuamente, puesto que responden a las ideas y comentarios que surgen en la discusión" (**Kruger**, 1991, p. 24).

La pertinencia del grupo de discusión para esta investigación radica en la posibilidad que este método ofrece para poder comprender discursos que serían inaccesibles a través de técnicas cuantitativas. Los grupos de discusión permiten indagar acerca de "(…) las percepciones, sentimientos y maneras de pensar (…)" de los participantes (**Krueger**, 1991, p. 24). Tienen una función principal:

> "la búsqueda del significado de los fenómenos, la obtención de la palabra de los sujetos de la acción social, el lugar primordial del lenguaje, etc." (**Callejo**, 2002, p. 410).

Se han realizado tres grupos de discusión constituidos por entre siete y diez, como es habitual en la práctica de la investigación mediante grupos de discusión (**Krueger**, 1991; **Morgan**, 1998; **Callejo**, 2001). Los participantes son hombres y mujeres, residentes en Madrid, con y sin discapacidad, aunque para este trabajo se ha tenido en cuenta solo la opinión de las personas con discapacidad[1].

Siguiendo las recomendaciones de **Morgan** (1996), se procedió a la homogeneización de preguntas y procedimientos utilizados con el fin de sistematizar el desarrollo de todos los grupos y permitir la comparabilidad entre ellos. Asimismo, previo al desarrollo de los grupos, se delineó un argumentario para orientar el discurso según líneas temáticas básicas para alcanzar los objetivos de la investigación. Este era lo suficientemente completo para obtener una aproximación a la cuestión sin olvidar ningún punto, pero lo suficientemente abierto para no condicionar los resultados y permitir que sus participantes se expresaran libremente respecto a los temas.

El argumentario de los grupos de discusión se estructuró en torno a seis grandes ejes de acuerdo con los objetivos y las preguntas de investigación:

1. Atención mediática.
2. Características del tratamiento informativo: temas y mensajes.
3. Protagonistas de las noticias.
4. Lenguaje utilizado.
5. Causas del tratamiento informativo.
6. Posibles formas de mejorar la información sobre la discapacidad.

El discurso de los grupos ha estado guiado, pero no condicionado, por dos moderadoras expertas que cuentan con amplia experiencia previa en la moderación de grupos de discusión con distintos tipos de públicos. La duración de cada reunión fue variable respondiendo a la conversación establecida entre los participantes. Las sesiones fueron grabadas y posteriormente transcritas para facilitar su análisis interpretativo. La información recabada se segmentó, para cada eje temático, a través de unidades gramaticales (frases o párrafos) y mediante las características de los participantes. Posteriormente se establecieron categorías. Finalmente se hizo la codificación del texto mediante un código de colores. Se procedió a la lectura profunda del texto asignando a cada unidad el código de la categoría que corresponde e identificando a cada participante. Una vez reunido el contenido de los tres grupos se ha comparado, buscando puntos comunes y discrepancias en las diversas líneas temáticas que se abordaron; de este modo, se ha explorado la relación entre las variables dentro de la población estudiada (**Onwuegbuzie** *et al.*, 2009; **Vallés-Martínez**, 1997). La última fase del proceso de análisis cualitativo ha consistido en inferir, a partir de los elementos más significativos extraídos de los discursos obtenidos, una serie de conclusiones vinculadas a los objetivos de la investigación y categorizadas por criterios temáticos. Para ejemplificar aspectos relevantes del contenido discursivo de los diferentes grupos de discusión se han incluido extractos de declaraciones de los participantes en los resultados.

Tabla 1. Ficha técnica de los grupos de discusión

Items	Grupo A	Grupo B	Grupo C
Número de participantes	9 participantes	9 participantes	10 participantes
Sexo	5 mujeres y 4 hombres	5 mujeres y 4 hombres	7 mujeres y 3 hombres
Edad	20-35 años (3) 36-50 años (3) 51–65 años (2)	20-35 años (2) 36-50 años (6) 51–65 años (1)	20-35 años (3) 36-50 años (6) 51–65 años (1)
Residencia	Madrid	Madrid	Madrid
Con o sin discapacidad	Heterogéneo (6 personas con discapacidad)	Heterogéneo (4 personas con discapacidad)	Heterogéneo (5 con discapacidad)
Tipo de discapacidad	3 físicas 3 sensoriales	2 físicas 1 sensorial 1 mental	2 físicas 3 sensoriales
Duración del discurso	100 min	110 min	113 min
Fecha	14 de octubre de 2019	17 de octubre de 2019	18 de octubre de 2019

3. Resultados

Las personas con discapacidad y sus entidades representativas consideran que los medios de comunicación han aumentado la atención mediática a la discapacidad. Existe acuerdo en que la cobertura periodística se ha incrementado y que las personas con discapacidad han ganado protagonismo informativo. Consideran el aumento de la visibilidad un éxito atribuible no solo a los medios, sino a la sociedad en general y, muy especialmente, al empeño de las diversas asociaciones y agrupaciones de personas con discapacidad.

> "…no podemos decir que estamos fatal, sería mentira, sería injusto por el trabajo que hemos hecho las personas con discapacidad y por el trabajo que está haciendo la sociedad en general. En los medios de comunicación se ha avanzado" (Grupo A)

> "desde *Cermi* llevamos como una década o más mirando la evolución del tratamiento de la discapacidad y efectivamente yo soy optimista" (Grupo A)

Una vez lograda la visibilidad mediática, emerge la necesidad de normalizar la discapacidad:

> "si hemos avanzado en el cuantitativo ahora toca en el cualitativo" (Grupo B).

Señalan que es importante estar en los medios, pero no es menos relevante qué y cómo se cuenta la discapacidad. Consideran que es necesario mejorar el tratamiento mediático.

> Una vez lograda la visibilidad mediática, emerge la necesidad de normalizar la discapacidad

> "empezar a meter otros discursos, otras formas de hablar, otras formas de pensar en este tipo de foros, porque hay muchos armarios todavía cerrados. Hay muchos cuartos oscuros que tenemos que iluminar" (Grupo B)

El principal reclamo que hacen los participantes en los grupos es su derecho a la normalidad y critican que las informaciones relativas a la discapacidad tienden a referirse a aspectos extraordinarios, insólitos, extravagantes y sensacionalistas.

Del discurso emergen cinco características habituales en la información sobre la discapacidad y las personas con discapacidad. Los participantes en los grupos consideran de manera unánime que se deben combatir para conseguir la normalización. Esas características son:

Información sesgada. Existe un triple sesgo en la información sobre la discapacidad. El primero, respecto al tipo de mensajes que se transmiten, el segundo, sobre la forma de abordar la discapacidad y el tercero, en cuanto a las discapacidades sobre las que se informa.

En lo que respecta al primer sesgo, la discapacidad en los medios tiene fundamentalmente dos formas de presencia. La primera, identifica la discapacidad con un problema; la segunda, la vincula con la diversidad. Esta última es la que demandan los participantes en los grupos, pero de momento es minoritaria.

> "reivindicar la discapacidad como forma de ser o con una condición más" (Grupo B)

La primera perspectiva es la más habitual en los distintos medios de comunicación. La discapacidad se asocia a enfermedad, limitaciones, marginación y dependencia. Las noticias suelen referirse a los problemas de accesibilidad, con mención expresa a barreras arquitectónicas, cognitivas y sociales. Es una información victimista y reduccionista centrada en los problemas. Demandan que se corrija ese sesgo enfatizando el enfoque que asocia discapacidad con diversidad. La discapacidad, en este encuadre, sería una característica más de la persona con discapacidad y no la única ni principal. Instan a que la discapacidad sea presentada como una expresión más de la diversidad social.

El segundo sesgo se observa en que en este tipo de informaciones lo accidental, que es la discapacidad, se muestra siempre como lo fundamental. Los profesionales de la información tienden a incidir en la discapacidad y a obviar todos los rasgos que las personas que la tienen comparten con el resto de los ciudadanos:

> "yo primero soy persona" (Grupo A)

dice uno de los participantes. Es necesario

> "reivindicar la discapacidad como una forma de ser o como una condición más",

expresa otro (Grupo B). Piden que los medios ofrezcan una imagen de las personas con discapacidad en toda su complejidad.

También hay un sesgo en cuanto a las discapacidades sobre las que se informa. Las de tipo físico son las más presentes en los medios. La discapacidad se asocia a la silla de ruedas, ciegos o personas con limitaciones auditivas. Otras discapacidades menos conocidas y menos visibles no encuentran un espacio en los medios de comunicación. La desatención mediática a este otro tipo de limitaciones funcionales lleva a los participantes en los grupos a hablar de

> "doble discriminación" (Grupo A).

> "Cuando pensamos en una persona con discapacidad, ¿qué imagen nos viene a la cabeza? Alguien en silla de ruedas o un ciego, pero la realidad es muchísimo más amplia" (Grupo A)

> "...hay mucha discapacidad intelectual invisible" (Grupo B)

Sensacionalismo. La información sobre la discapacidad se convierte en noticiable principalmente cuando acompaña a situaciones espectaculares, impactantes o dramáticas. Se busca el morbo, la espectacularidad en los titulares y en las imágenes. Se convierte en noticia lo inusual.

> Es importante estar en los medios, pero no es menos relevante qué y cómo se cuenta la discapacidad

> "si no tienes una *percha* o si no hay algo de morbo o lo que sea, al final no te lo compran, esto es así" (Grupo A)

No obstante, son conscientes de que en

> "los medios de comunicación a veces la normalidad no es noticia" (Grupo A),

no vende. Asumen que las personas con discapacidad deben estar presentes cuando haya algo que lo justifique. No demandan sobreinformación, solo una cobertura proporcionada a la importancia de los hechos, pero con una mirada más amplia.

Información estereotipada. Del análisis de los grupos de discusión se deduce que los participantes perciben dos encuadres mediáticos específicos ligados a las personas con discapacidad: "víctima" y "superhéroe".

El encuadre "víctima" está ligado a una construcción de la realidad en la que se asocia la discapacidad con la falta, el problema, la lástima, la enfermedad y la dependencia. Se les muestra como personas incapaces de hacer nada por sí mismas, personas que no pueden llevar una vida autónoma y que requieren asistencia. Se muestra la discapacidad como objeto de paternalismo. En cambio, para el encuadre alternativo, las personas con discapacidad se muestran como superhéroes, como personas talentosas y resolutivas a las que su experiencia vital las ha dotado de una sensibilidad especial y de una gran capacidad de superación. Relatan historias de logros y conquistas y las personas con discapacidad se presentan como modelos para los demás.

> "...nos sacan siempre o como víctimas de madre mía que lo desahucian, que la silla se la queman, o como héroes..., y la mayoría de la gente con discapacidad es normal, ni sube el Everest a la pata coja ni le queman la casa" (Grupo A)

Aunque el acuerdo sobre la existencia de estos dos encuadres mediáticos es absoluto, hay participantes que observan una mejoría en el tratamiento informativo

> "...hay más gente que está haciendo las cosas bien y que también se está dando voz a las asociaciones, al tema de reivindicar derechos, porque es verdad que no es todo o presentar historias de superación o solamente desgracias y yo creo que cada vez hay más espacios para que cuenten reivindicaciones en primera persona" (Grupo A)

> "...se está transmitiendo a la sociedad una imagen como más positiva, más normalizada, fuera de estereotipos, siempre va a haber casos, la batalla del lenguaje, que esa es otra, y es verdad lo del superhéroe o la víctima, pero se está avanzando" (Grupo A)

Enfoques despersonalizados. Las entidades dedicadas a la discapacidad son una de las principales fuentes informativas para los medios (**Peñas**; **Hernández**, 2019) y el buen trabajo que han desempeñado ha permitido aumentar la visibilidad. Sin embargo, manifiestan que sería recomendable poner rostro a las noticias; dar voz a las personas con discapacidad, que solo se expresan con voz propia en las informaciones sobre casos ejemplares. Se insiste en la necesidad de que las personas con limitaciones funcionales sean convocadas para hablar sobre la discapacidad desde ángulos habitualmente no explorados: "visibilizar la discapacidad de una manera natural", pero también sobre otro tipo de temas. Cuando se alude a personas con limitaciones en el funcionamiento intelectual, la ausencia de voz propia es todavía más evidente.

> "...siempre se nos convoca (...) para hablar de discapacidad, nunca vemos en televisión a un ingeniero con discapacidad hablando de eso o a un directivo de conocimiento hablando de la institución" (Grupo B)

> "...creo que lo mejor es que la imagen de la discapacidad sea real y positiva, y que cada uno aparezcamos en los medios en nuestros propios ámbitos profesionales" (Grupo B)

> "...todas las organizaciones de discapacidad luchamos porque las personas con discapacidad hablen de lo que tienen que hablar, no sobre su discapacidad solamente" (Grupo B)

> "...falta hablar de la discapacidad en primera persona, personas con TEA, personas con parálisis cerebral, grandes discapacidades yo no las veo en muchos foros. Tenemos casi siempre las mismas caras, los mismos discursos" (Grupo B)

Enfoques homogéneos. Los medios de comunicación muestran a las personas con discapacidad como un colectivo homogéneo, cuando cada persona es única. Las generalizaciones hacen daño y distorsionan. Todas las personas con discapacidad no son iguales y no se les puede atribuir capacidades, sentimientos y comportamientos comunes.

> "...igual que hay gente sin discapacidad que se supera a sí misma cada día, intenta aprender cosas nuevas y otras que no, pues con discapacidad igual, hay gente que intenta aprender cosas nuevas, que intenta dar lo mejor de sí misma, intenta mejorar cada día y habrá gente con discapacidad que reivindique su derecho a ser lineal" (Grupo A)

> "...se lucha por la discapacidad y está bien luchar en bloque porque bueno, pues a lo mejor somos un porcentaje menor de la sociedad y es lo que tenemos en común, pero es que las personas con discapacidad somos súper diferentes" (Grupo A)

El acuerdo sobre las características del tratamiento informativo de la discapacidad es absoluto, aunque se observan unas posiciones más críticas y otras más benevolentes con los medios de comunicación.

Los críticos denuncian errores en el uso del lenguaje en los medios y en la calle

> "...se está utilizando un lenguaje en comunicación y en los medios de comunicación que no es el adecuado" (Grupo A)

> "...hay muchos términos que, aunque ahora nos parecen sorprendentes, se siguen utilizando, la minusvalía es un término que está ahí y lo escuchas en la calle" (Grupo A)

> "...cuando salió Urdangarín de la cárcel el titular era que Urdangarín salía de la cárcel para atender a disminuidos y cosas por el estilo, si es que no se escribe así (…) lo primero que tenemos que hacer es luchar contra esos prejuicios, y para luchar contra esos prejuicios hay que enseñar una imagen de la discapacidad y utilizar un lenguaje de la discapacidad correcto" (Grupo C)

La crítica se dirige a la utilización de términos discriminatorios, pero también al abuso del lenguaje políticamente correcto.

> "...siempre peleando por sacar, y perdonar la expresión, la discapacidad del armario, y ahora que tenemos una convicción que lo respalda, ahora nos pasamos de frenada con unos eufemismos estúpidos, pero ojo, que hay medios de comunicación que en sus libros de estilo no dejan poner discapacidad, tienes que poner capacidades diferentes o diversidad funcional" (Grupo A)

> "…utilizar capacidades diferentes, diversidad funcional, que está de moda, pero que a mí la verdad me suena, diversidad funcional, me suena como una máquina (…) Son eufemismos (…) Lo correcto es persona con discapacidad, como una persona ciega, una persona con discapacidad física, una persona sorda, lo que quieras, pero se subraya mucho lo de la persona para que no se ponga el acento en la discapacidad, no, soy una persona y tengo esto" (Grupo A)

Otros participantes en los grupos, estando de acuerdo en que hay amplios márgenes de mejoría, ponen el acento en que se ha avanzado mucho. Defienden que fiscalizar las noticias sobre discapacidad y presionar a los periodistas cuando cometen errores puede ser contraproducente, porque puede favorecer el apagón informativo cuando el objetivo es ser visibles.

> "...al final corres el riesgo de convertirte en un colectivo incómodo" (Grupo A)

> "...buscar a los medios de comunicación, de tratar con ellos como aliados, nunca convertirnos en un colectivo, no me gusta nada esa palabra, un colectivo coñazo" (Grupo A)

> "...cierta flexibilidad porque a veces yo creo que castigamos demasiado a los medios de comunicación por errores de este tipo y la discapacidad de momento vende lo que vende" (Grupo C)

> "...si un día un medio de comunicación dice algo que no queremos, tampoco ponerle en redes sociales como a veces ocurre, porque a lo mejor dicen: pues mira, a mí esto me resulta difícil de abordar y encima me lo están poniendo complicado pues al cajón, que tengo mil temas, entonces sí pero cuidado" (Grupo C)

> "...hay tanta sensibilidad a flor de piel que dices: lo dejo, porque es que me voy a dedicar a otra cosa, no puedes" (Grupo C)

Los medios de comunicación son muy importantes para la visibilización, pero las personas con discapacidad que participan en la investigación no eluden su propia responsabilidad en la lucha por normalizar la discapacidad y en la denuncia de situaciones injustas, señalan que deben

> "tomar las riendas del cambio" (Grupo A)

> "Tenemos que reivindicarnos como somos" (Grupo B)

> "...hacer denuncia activa de aquellos espacios donde no somos bienvenidos" (Grupo B)

> "Se necesita hablar de la persona con discapacidad en primera persona" (Grupo A)

Hay personas con discapacidad que opinan que tiene que haber una implicación mayor por su parte, que deberían aflorar la discapacidad, porque son necesarios los referentes. Otros, en cambio, defienden la libertad individual de manifestar o no la discapacidad y recuerdan las barreras que hacerlo puede suponer.

> "En toda mi trayectoria no he aflorado la discapacidad, cuando pertenecía al comité de diversidad en una empresa energética y ya era directiva intenté aflorarlo y una persona de recursos humanos, que yo creo que me quería bien, me recomendó no hacerlo, precisamente porque era directora (…) yo doy fe que no estaría hoy aquí si hubiera aflorado en el año 2000 o en el año 2001 que tenía discapacidad, estoy segura" (Grupo C)

La comunicación juega un papel fundamental, no solo como elemento para la transmisión de información, sino también en la formación de valores y opiniones entre la ciudadanía. En ello influye la información, pero también la ficción. Los participantes en los grupos valoran el papel de la ficción audiovisual y de la publicidad para normalizar la discapacidad. Hay menciones explícitas a lo que ha implicado la película *Campeones*. Consideran unánimemente que este film ha supuesto "un punto de inflexión clarísimo" (Grupo C), aunque también hay una persona que reflexiona sobre "el factor moda".

> "...hay una parte súper positiva, efectivamente, visibilizar, normalizar, son actores, hacen peliculones, y toda la emotividad, de repente, no, como cambia un poco la mirada (…) Pero luego pasa que se convierte en una moda, somos capaces de todo lo que tocamos destrozarlo un poco" (Grupo C)

Otra de las participantes en los grupos coincide con esta percepción de que la discapacidad está de moda

> "...a mí me parece que es una sensibilización que ahora está de moda, por así decirlo, y entonces tienen que coger al ejemplo más claro o más evidente para el buenismo" (Grupo A)

No obstante, la percepción predominante es que la ficción tiene una capacidad demostrada para modificar las actitudes y los valores de los ciudadanos. Por este motivo, celebran que las personas con discapacidad empiecen a tener un lugar en series, anuncios y programas de televisión.

> "...yo me acuerdo hace muchos años cuando en el *Aquí no hay quien viva* empezaron a aparecer los primeros personajes homosexuales, parejas de un mismo sexo y al principio todo el mundo se llevaba la mano a la cabeza. Y ahora ya es normal, y en todos los anuncios hay una pareja de chicas y una pareja de chicos. Y es verdad que ahora en todos los anuncios, si os dais cuenta, o en muchas de las campañas publicitarias, se empieza también a ver con naturalidad una persona con discapacidad" (Grupo A)

> "Entonces sí que es verdad que poco a poco, con calzador, pero sí que se están consiguiendo cosas, y en esto que os decía yo de los anuncios que va por modas o no, pero llegará un momento en que se pase la moda y quede ahí, como que a nadie le va a sorprender el ver una persona con discapacidad de figuración en una serie..." (Grupo A)

4. Tratamiento mediático actual: causas y soluciones

De los grupos de discusión emergen dos causas del tratamiento informativo de la discapacidad. La primera es el desconocimiento que tienen los periodistas de la realidad de las personas con discapacidad. Señalan que no hay periodistas especializados trabajando en los medios y consideran que no están bien preparados para abordar la información relacionada con la discapacidad. La consecuencia son noticias, en muchos casos, despectivas y estigmatizantes, generadoras de prejuicios y paternalismos.

En segundo lugar, las condiciones laborales de los periodistas. Los participantes en los grupos reflexionan sobre la prisa, la inmediatez, la necesidad de mantener la audiencia y la simplificación de las informaciones que rigen en los medios de comunicación actualmente. Para combatir este contexto, las asociaciones han elaborado guías dirigidas a los medios de comunicación. Basándose en ellas, los periodistas podrán tratar estas noticias de una manera más profesional, favoreciendo la normalización y eludiendo estereotipos.

La primera solución que proponen los participantes en la investigación consiste en incorporar la discapacidad en la agenda mediática de manera plural y diversa. A los mensajes centrados en las limitaciones y problemas es necesario incorporar mensajes que aborden la discapacidad desde la perspectiva de la diversidad, la reivindicación y las soluciones. Además, es necesario que se hable de la misma de manera transversal, que no sea información destinada a "secciones gueto", sino que se incluya incorporada a la información general.

Hay que recordar que la discapacidad es una condición de la persona, pero no es lo que le define. Insisten en que la información no debe centrarse en sus limitaciones, sino en sus capacidades personales, eludiendo las generalizaciones y los estereotipos. Para enfatizar su singularidad aseguran que es necesario dar voz a los protagonistas. Las fuentes institucionales y oficiales, así como la opinión de los expertos son relevantes, pero recomiendan que se ponga rostro a las informaciones dando voz a las personas con discapacidad.

El lenguaje no es neutral, con las palabras se integra o se margina. Los participantes en los grupos creen necesario que los medios eviten los eufemismos. Las personas con discapacidad rechazan la utilización de expresiones como personas con capacidades diferentes, personas con diversidad funcional, personas especiales, discapacitados, incapacitados, inválidos, minusválidos, disminuidos, invidentes o cualquier otra que trate de amortiguar la discapacidad. Según el manual de las normas de estilo del *Comité Español de Representantes de Personas con Discapacidad* (*Cermi*) hay que desterrar todas estas expresiones que la inmensa mayoría de las personas con discapacidad y su movimiento rechazan, porque

> "no describe la realidad, sino que resulta confuso e incluso en ocasiones pretende ocultar esa realidad, atacando el enfoque inclusivo y de defensa de derechos" (*Cermi*, 2011).

Existe acuerdo en que la expresión que mejor les define es la de personas con discapacidad, que acentúa la idea de que son, ante todo, personas. También hay unanimidad en el uso del término "inclusión" en vez de "integración".

En la que denominan la "batalla por el lenguaje", también señalan que se debe evitar el uso de palabras con carga negativa como "afectados", "padecen", "sufren" o "son víctimas de", así como la utilización de diminutivos. Los medios deben alejarse del paternalismo y del lenguaje infantilizado.

5. Conclusiones

Los tres objetivos que persiguen las personas con discapacidad, en lo que respecta al tratamiento que le dan los medios a la discapacidad, son visibilidad, normalidad y naturalidad. El primero lo consideran cumplido. Afirman que durante los últimos años se ha incrementado la atención mediática a la discapacidad. Se trata de un éxito atribuible principalmente a las organizaciones y asociaciones de personas con discapacidad, en las que la creación de gabinetes de prensa y comunicación ha incrementado la visibilidad del colectivo y ha sentado las bases para provocar el comienzo de su normalización. Una vez conquistada la visibilidad, afirman que lo deseable es continuar avanzando en la normalización de la discapacidad. Para ello es necesaria una información menos reduccionista, que explique la discapacidad desde sus múltiples facetas, no solo sobre los problemas y limitaciones, que advierten, es el enfoque más habitual.

En la investigación emergen tres tipos de sesgos en las noticias sobre discapacidad. La primera, referida al tipo de mensajes que se transmiten; la segunda, en la forma de abordar la discapacidad y la tercera, respecto a las discapacidades sobre las que se informa.

La discapacidad se convierte en noticia cuando acompaña a situaciones espectaculares, impactantes o dramáticas. Argumentan que los periodistas necesitan "una percha" que despierte el interés. Son conscientes de que "lo normal" no suele ser noticia y recalcan que no piden privilegios, solo reclaman estar en los medios cuando haya algo que lo justifique. Dicho de otro modo, no demandan sobreinformación, solo una cobertura proporcionada a la importancia de los hechos, pero con una mirada más amplia.

La discapacidad en los medios tiene dos formas de presencia. La más habitual identifica la discapacidad con un problema, la menos frecuente y ambicionada por los participantes en la investigación muestra la discapacidad como un elemento más de la diversidad social. Los encuadres mediáticos específicos ligados a las personas con discapacidad también son dos: "víctima" y "superhéroe". El primero asocia la discapacidad con la enfermedad y la dependencia. En el encuadre alternativo, las personas con discapacidad se muestran como personas resolutivas y con una gran capacidad de superación. Ambos encuadres muestran una imagen estereotipada y acentúan la discapacidad frente a las cualidades personales que cada uno tiene. En las noticias lo accidental, que es la discapacidad, se muestra como lo fundamental.

La silla de ruedas, el perro guía o el bastón son tres imágenes icónicas de la discapacidad. Aunque estereotipadas, las discapacidades físicas encuentran más espacios en los medios. La discapacidad intelectual y las discapacidades no visibles apenas reciben atención mediática. Este hecho les pone en una situación de especial vulnerabilidad. Las personas que tienen una discapacidad no visible afirman sentirse doblemente discriminados, contrariamente a lo que pudiera pensarse.

Otra conclusión de la investigación es que los participantes en los grupos encuentran que la información sobre la discapacidad está sesgada, estereotipada, es sensacionalista, aparece despersonalizada y trata a las personas con discapacidad como un grupo homogéneo. Esta percepción coincide con los resultados de las investigaciones científicas y los informes de asociaciones e instituciones sobre el tratamiento informativo de la discapacidad analizadas en el marco teórico (*Fundación ONCE*, 2010; *Cermi*, 2011; **Soto-Rosales**, 2015; *Fundación A La Par*, 2018).

También coinciden los resultados de esta investigación con los estudios precedentes en la crítica hacia el lenguaje empleado en los medios de comunicación. Consideran que abundan los términos discriminatorios, pero también observan el abuso del lenguaje políticamente correcto. Defienden que deben evitarse las palabras con carga negativa, los diminutivos y otras formas de lenguaje infantilizado, así como los eufemismos. Existe acuerdo en que la expresión que mejor les define es la de personas con discapacidad y abogan por la sencillez y el lenguaje directo: prefieren que se hable de "discapacidad" en lugar de "capacidades diferentes" o "diversidad funcional". También hay unanimidad en el uso del término "inclusión" en vez de "integración".

En los grupos de discusión se plantean dos causas del tratamiento informativo de la discapacidad anteriormente descrito. La primera es la falta de formación especializada de los periodistas que cubren este tipo de noticias. El desconocimiento supone que se perpetúen estereotipos, se utilice un lenguaje inapropiado y se comentan errores en la información aportada. Además, supone incapacidad para seleccionar temas u ofrecer enfoques diferentes y más complejos. La segunda causa de los sesgos informativos es la precariedad laboral. Afecta a todos los periodistas y a la calidad de toda la información, también la centrada en la discapacidad. Los profesionales no disponen del tiempo ni de los recursos suficientes para elaborar noticias con cuidado y esmero.

A pesar de los múltiples márgenes de mejoría en la información sobre la discapacidad, se muestran satisfechos con los éxitos logrados y optimistas respecto al futuro. Son muy conscientes de que la visión que muestran los medios de comunicación puede perpetuar prejuicios o, al contrario, ayudar a normalizar la discapacidad, ayudar a superar los estereotipos y los sesgos inconscientes. Reiteran que es necesario rehuir la generalización, la centralidad en los aspectos negativos y la utilización de un lenguaje discriminatorio o eufemístico, que traslada una imagen simplificada y cargada de valores negativos.

El gran reto es mantener los logros obtenidos y normalizar la imagen que proyectan los medios de comunicación. Para conseguirlo abogan por que no se enfoque la discapacidad como algo negativo, reivindican una información transversal sobre la discapacidad y piden que se utilice el lenguaje adecuado. Reconocen que les gustaría leer noticias que acentúen la persona y afirman que enriquecería y ayudaría a naturalizar la discapacidad tener voz en los medios para hablar de temas ajenos a su discapacidad. Dos soluciones que en el corto plazo consideran que podrían ayudar a mejorar la información, y con ello la percepción pública sobre la discapacidad, son formar a periodistas especializados y conseguir elaborar una guía unificada. Existen

> Los tres objetivos que persiguen las personas con discapacidad en lo que respecta al tratamiento informativo sobre la discapacidad son visibilidad, normalidad y naturalidad

diferentes documentos con recomendaciones sobre el tratamiento informativo. El objetivo sería tener solo uno, que atienda a las reivindicaciones de las personas con discapacidad y que aporte criterios claros y simples a las redacciones.

Los resultados de la investigación permiten concluir que existe una percepción unánime sobre el tratamiento informativo de la discapacidad. En los grupos participaron hombres y mujeres con diferentes discapacidades, y las impresiones sobre el modo en el que los medios cuentan a los ciudadanos todo lo relacionado con la discapacidad es muy parecido. No se han observado diferencias significativas en las opiniones sobre la visibilidad de la discapacidad en los medios, sobre los encuadres informativos percibidos y sobre el lenguaje utilizado. También coinciden en el análisis de las causas y posibles soluciones para una información más inclusiva. Se han detectado, no obstante, dos puntos de vista divergentes. El primero sobre la actitud hacia los medios de comunicación y el segundo sobre la estrategia que debería adoptarse en la relación con los mismos. Ambas posturas están equilibradas. La mitad de los participantes mantienen una posición crítica y la otra mitad se muestra más benevolente con los medios. Los primeros prefieren una actitud combativa y los segundos consideran que es mejor tener a los periodistas como aliados que como enemigos. Para ello defienden una postura menos fiscalizadora con la información sobre la discapacidad.

> La discapacidad se convierte en noticia cuando acompaña a situaciones espectaculares, impactantes o dramáticas. Argumentan que los periodistas necesitan "una percha" que despierte el interés

Nota

1. La participación de personas con y sin discapacidad se explica porque este estudio forma parte de una investigación más amplia sobre la inclusión de las personas con discapacidad en el ámbito de la comunicación en España promovido por la Asociación de Directivos de Comunicación con la colaboración del *Comité Español de Representantes de Personas con Discapacidad* (*Cermi*), *Fundación ONCE* y *Down España*, con el apoyo del *Ministerio de Trabajo, Migraciones y Seguridad Social*.

6. Referencias

Álvarez-Villa, Ángels; **Mercado-Sáez, María-Teresa** (2015). "La representación mediática del deportista con discapacidad en el reportaje televisivo Informe Semanal, un estudio de caso". *Revista mediterránea de comunicación*, v. 6, n. 1, pp. 27-43.
https://doi.org/10.14198/MEDCOM2015.6.1.03

Benavides-Delgado, Juan (2005). "Transformaciones del audiovisual: La presencia de la discapacidad en los medios de comunicación". *Revista Telos*, n. 62, pp. 89-95.
https://telos.fundaciontelefonica.com/archivo/numero062/la-presencia-de-la-discapacidad-en-los-medios-de-comunicacion

Bouza, Fermín (1998). "Comunicación política: encuestas, agendas y procesos cognitivos electorales". *Praxis sociológica*, n. 2, pp. 49-58.
https://www.ucm.es/data/cont/docs/471-2013-11-05-Comupoli.pdf

Callejo, Javier (2001). *El grupo de discusión: introducción a una práctica de investigación*. Barcelona: Ariel. ISBN: 978 84 34428799

Cermi (2011). *Decálogo para una imagen social apropiada de la discapacidad*.
http://ibdigital.uib.es/greenstone/collect/portal_social/index/assoc/cermi000/4.dir/cermi0004.pdf

Díaz-Aledo, Loles (2007). "La representación de la discapacidad en los medios de comunicación. Cómo lograr una presencia más adecuada". En: Álvarez-Pousa, Lois; Villanueva, José; Barbarena, Tareixa; Reboiras, Óscar; Evans, Joám. *Comunicación y discapacidades: actas do Foro internacional sobre Comunicación e Discapacidades.* A Coruña: Colexio Profesional de Xornalistas de Galicia, pp. 57-76. ISBN: 978 84 690 4140 6
https://dialnet.unirioja.es/servlet/articulo?codigo=2386949

Fernández-Cid-Enríquez, Matilde (2010). "Medios de comunicación, conformación de imagen y construcción de sentido en relación a la discapacidad". *Política y sociedad*, v. 47, n. 1, pp. 105-113.
https://revistas.ucm.es/index.php/POSO/article/view/POSO1010130105A

Fraser, Vikki; **Llewellyn, Gwynnyth** (2015). "Good, bad or absent: Discourses of parents with disabilities in Australian news media". *Journal of applied research in intellectual disabilities*, v. 28, n. 4, pp. 319-329.
https://doi.org/10.1111/jar.12142

Fundación A La Par (2018). *Informe sobre el tratamiento de la discapacidad en las redes sociales de los medios de comunicación*.
http://fape.es/wp-content/uploads/2018/04/Informe-Periodismo-y-Discapacidad.pdf

Fundación ONCE (2010). *Percepción y proyección de la imagen de las personas con discapacidad por los profesionales de los medios de comunicación*.
https://sid.usal.es/idocs/F8/FDO24796/percepcion_imagen.pdf

Holton, Avery E.; **Farrell, Laura C.**; **Fudge, Julie L.** (2014). "A threatening space?: Stigmatization and the framing of autism in the news". *Communication studies*, v. 65, n. 2, pp. 189-207.
https://doi.org/10.1080/10510974.2013.855642

Kim, Kyoung-Tae; **Lee, Soonhwan**; **Oh, Eung-Soo** (2017). "Athletes with disabilities in the Paralympic Games: a framing analysis of television news". *Managing sport and leisure*, v. 22, n. 4, pp. 255-275.
https://doi.org/10.1080/23750472.2018.1445976

Krueger, Richard A. (1991). *Focus groups: A practical guide for applied research*. Beverly Hills, CA: Sage Publications. ISBN: 978 1 412969475

Labio-Bernal, Aurora (2006). "Del estereotipo al amarillismo: prácticas periodísticas incorrectas en el tratamiento de grupos sociales vulnerables". *Anàlisi: Quaderns de comunicació i cultura*, n. 33, pp. 31-44.
https://hdl.handle.net/11441/29596

Mercado-Sáez, María Teresa; **Álvarez-Villa, Ángeles** (2012). "Deportistas paralímpicos en televisión, una representación mediática de la discapacidad". En: Mateos, Concha; Hernández, Ciro-Enrique; Herrero-Gutiérrez, Francisco-Javier; Toledano, Samuel; Ardèvol, Alberto-Isaac (coords.). *Actas IV Congreso internacional latina de comunicación social: Comunicación, control y resistencias.* Tenerife: Universidad de la Laguna, pp. 1-13. ISBN: 978 84 15698 06 7
http://www.revistalatinacs.org/12SLCS/2012_actas/023_Mercado.pdf

Morgan, David L. (1996). "Focus groups". *Annual review of sociology*, n. 22, pp. 129-152.
https://doi.org/10.1146/annurev.soc.22.1.129

Observatorio Estatal de la Discapacidad (2018). *Informe Olivenza 2017 sobre la situación general de la discapacidad en España*.
https://observatoriodeladiscapacidad.info/attachments/article/110/Informe%20Olivenza%202017%20v5.7.pdf

Onwuegbuzie, Anthony J.; Dickinson, Wendy B.; Leech, Nancy L.; Zoran, Annmarie G. (2009): "Qualitative framework for collecting and analyzing data in focus group research". *International journal of qualitative methods*, v. 3, n. 8, pp. 1-21.
https://doi.org/10.1177/160940690900800301

Orero, Pilar; **Pereira, Ana-María**; **Utray, Francisco** (2017). "Visión histórica de la accesibilidad en los medios en España". *Trans. Revista de traductología*, n. 11, pp. 31-43.
https://doi.org/10.24310/TRANS.2007.v0i11.3096

Peñas, Esther; **Hernández, Paz** (2019). *Guía de estilo sobre la discapacidad para profesionales de los medios de comunicación*. Madrid: Real Patronato sobre Discapacidad.
https://plenainclusionmadrid.org/recursos/guia-de-estilo-sobre-discapacidad-para-profesionales-de-los-medios-de-comunicacion

Perujo-Serrano, Francisco (2002). "Discapacidad y medios de comunicación; entre la información y el estereotipo". Ámbitos, n. 7-8, pp. 249-277.
https://revistascientificas.us.es/index.php/Ambitos/article/view/9476

Rius-Sanchis, Inmaculada; **Solves-Almela, Josep** (2010). "Discapacidad y comunicación: periodismo especializado para públicos diversos". *Comunicación y hombre*, n. 6, pp. 105-116.
https://doi.org/10.32466/eufv-cyh.2010.6.121.165-176

Rius-Sanchis, Inmaculada; **Solves-Almela, Josep** (2012). "Tratamiento de la discapacidad en los medios valencianos". En: *III Congreso internacional AE-IC*.
https://bit.ly/2XvoFRn

Sánchez-Valle, María; **Vázquez-Barrio, Tamara**; **Viñarás-Abad, Mónica** (2019). *Inclucom. Análisis de la inclusión y capacidades de desarrollo profesional de las personas con discapacidad en el* ámbito de la comunicación en España. Madrid: Asociación de Directivos de Comunicación.
http://www.dircom.org/actualidad-dircom/item/10164-informe-inclucom

Soto-Rosales, Antonio (2015). "Periódicos y discapacidad: conformación de una imagen". *Estudios sobre el mensaje periodístico*, v. 21, n. 2, pp. 1241-1254.
https://doi.org/10.5209/rev_ESMP.2015.v21.n2.50913

Vallés-Martínez, Miguel (1997). *Técnicas cualitativas de investigación social. Reflexión metodológica y práctica profesional.* Madrid: Síntesis. ISBN**:** 978 84 7738 449 6

Vega-Fuente, Amando; **Martín, Raquel** (1999). "Los medios ante la discapacidad: más allá de los estereotipos". *Comunicar*, n. 12, pp. 111-116.
https://doi.org/10.3916/C12-1999-17

Zalbidea-Bengoa, Begoña; **Pérez-Fuentes, Juan-Carlos**; **Urrutia-Izaguirre, Santiago**; **López-Pérez, Susana** (2011). "Los periodistas españoles ante el tratamiento informativo de los grupos minoritarios y desfavorecidos". *Estudios sobre el mensaje periodístico*, v. 17, n. 2, pp. 457-476.
https://doi.org/10.5209/rev_ESMP.2011.v17.n2.38125

Citizen news content creation: Perceptions about professional journalists and the additive double moderating role of social and traditional media

Manuel Goyanes; Homero Gil de Zúñiga

How to cite this article:

Goyanes, Manuel; **Gil de Zúñiga, Homero** (2021). "Citizen news content creation: Perceptions about professional journalists and the additive double moderating role of social and traditional media". *Profesional de la información*, v. 30, n. 1, e300101.

https://doi.org/10.3145/epi.2021.ene.01

Manuscript received on November 23rd 2019
Accepted on April 22nd 2020

Manuel Goyanes
https://orcid.org/0000-0001-6537-9777

Universidad Carlos III de Madrid, Spain
Departamento de Comunicación
mgoyanes@hum.uc3m.es

Universidad de Salamanca, Spain
Democracy Research Unit (*DRU*)
dru@usal.es

Homero Gil de Zúñiga
https://orcid.org/0000-0002-4187-3604

Universidad de Salamanca (*DRU*), Spain
hgz@usal.es

Pennsylvania State University, EUA
hgzn@psu.edu

Universidad Diego Portales, Chile
homero.gildezuniga@mail.udp.cl

Abstract

Since the emergence and growing popularity of digital technologies and social media platforms, the relationship between professional and citizen journalism has been challenging. In recent years, however, this critical relationship has de-escalated due to a growing collaboration in shaping a complemental news repertoire. This study examines how social and traditional news use and users' perceptions on professional journalism affect citizens' news content creation. Based on survey data from Spain, we first find that social media use for news and users' positive perceptions on professional journalism predict citizens' news production behavior. Second, social media use for news and traditional media consumption are explored as additive moderators over the relationship of users' perceptions on professional journalism on citizens' news content creation, showing a positive significant effect. This study contributes to current conversations on the potential symbiotic association between professional and citizens journalism, arguing that citizens' perceptual appraisals on professional journalism are key in fostering public's participation through news content creation.

Keywords

Journalism; Citizen journalism; Professional journalism; News content creation; Perception; Social media use.

1. Introduction

In recent years, the craft of journalism has experienced a substantial shift due to a panoply of technological and professional innovations (**Túñez-López**; **Toural-Bran**; **Cacheiro-Requeijo**, 2018) which have disrupted the identities and practices of most news-workers worldwide (**Goyanes**, 2018). Traditionally, journalists were the central nexus between facts and audiences, the key to informing citizens about public affairs and politics (**Berganza**; **Lavín**; **Piñeiro-Naval**, 2017). However, with the emergence and popularization of digital technologies, personal blogs, and social media services, many users have been empowered to create, and disseminate their views and perspectives in valuable news contents (**Suárez-Villegas**, 2017). In this context, citizens' news content creation or "citizen journalism", has challenged and/or complemented the traditional ethos of professional journalism, amplifying its boundaries, scope, and roots (**Paulussen** *et al.*, 2007).

Normative discussions around professional and citizen journalism have flourished with the emergence of the internet, but their level of significance has arguably peaked due to the popularization of digital platforms for news sharing, consumption and distribution (**Masip**, 2016). In this regard, there is ample evidence suggesting that professional journalism has been traditionally reluctant to accept the basic tenets and practices of citizen journalism (**Cruz-Álvarez**; **Suárez-Villegas**, 2017). On the opposite side, citizen journalism has severely criticized the lack of product innovation of traditional journalism and the neglection of non-Western geographies in their coverages. However, despite the initial challenging relationship, both citizen and professional journalism end up diligently cooperating (**Picone**; **Courtois**; **Paulussen**, 2015).

Despite that extant research has provided insightful evidence accounting for citizens' news production patterns (**Lindner**, 2016), and offered important theoretical contributions on the normative foundations of the craft (**Kim**; **Lowrey**, 2015), scant attention has been paid to the potential media antecedents or motivations of citizens' content creations (**Holton**; **Coddington**; **Gil de Zúñiga**, 2013). We argue that citizens' perceptions on professional journalism may be a determinant perceptual factor in explaining their likelihood of engaging in news production. In short, to what extent citizens' perceptions on professional journalism and their practices explain and, therefore, foster their willingness to create news contents? Are such effects ubiquitous or contingent upon individual levels of traditional and social media news use?

Triggered by these gaps in the literature, this study seeks to advance an empirical model that theoretically accounts for the connection between citizens perceptions and their potential behavior germane to the journalism field. We argue that examining the relationship between citizens' perceptions of professional journalism (and their practices) and citizens' news content creation is important for several reasons. First, our empirical analysis may serve to debunk and challenge traditionally theorizations on the lack of normative connections between the two strands. In short, citizens' perceptions on professional journalism, if positive, may serve as incentive or motivation for citizens' participation through news content creation. Second, although extant research on the normative discussions between citizen and professional journalism has made durable efforts to divide them, we could test empirically, if such efforts, in citizens' views, hinder or foster their participation through news production. Third, and finally, our analysis indirectly tests whether professional practice may serve as stimulus or motivation for citizens' content creation and, therefore, the role of journalists' practice in triggering citizen journalism.

Drawing on survey data from Spain, we tested these relationships in a regression model that includes demographic information and political predispositions such as political interest as control variables. Our results indicate that holding positive perceptions on professional journalism and a higher levels of social media news led to increased news content creation. We also tested for group differences, in levels of citizens' perceptions on professional journalism between those who have a low, moderate and high social and traditional media use, showing a positive, additive moderation effect. Our study contributes to the growing discussions on the normative ideals of both professional and citizens journalism, arguing that journalists' performance appraisals play an important role in fostering citizens' participation through news content creation.

2. Professional and citizen journalism: normative discussions around their practices and foundations

Citizen journalism is a fuzzy term (**Wall**, 2015). Despite the fact that a single definition has never been agreed upon, many different terms have been used interchangeably, three fundamentally: user-generated content, participatory journalism and citizen journalism. **Holton**, **Coddington**, and **Gil de Zúñiga** (2013), provide a conceptual diagram to make sense of their differences.

- First, user generated content refers to all news contents produced by citizens, but not limited to solely journalistic tasks.
- Second, citizen journalism refers to citizens' news making process, typically pondered as an activity outside the traditional structures of media companies (**Paulussen** *et al.*, 2007).
- Last, participatory journalism draws on the contribution of citizens in professional journalism news production process, whether by giving voices to certain issues or by direct collaboration (**Scott**; **Millard**; **Leonard**, 2015). In this study, we conceptualize citizen journalism as any contribution to make sense of social reality, whether in the form of an opinion piece, a reporting, a chronicle, simple information or a post published in a blog or personal social media account (**Nah** *et al.*, 2015). Therefore, this definition also accounts for

> "citizens follow-up participation in the news process, such as social media posting, re-posting, linking, tagging, commenting and rating" (**Kim**; **Lowrey**, 2015, p. 7).

Since its emergence, citizen journalism has experienced a significant growth. This growing popularization, specially through social media, have triggered the emergence of scholarly debates around the normative foundations of both professional and citizen journalism. In this logic, a large body of work have established the main distinctions between them, underscoring the structural, practical and formal education that shape their morphology. First, according to extant research, professional and citizen journalism fundamentally differ in the organizational structure for news production and the qualifications needed for developing such activities (**Greewood**; **Thomas**, 2015). Professional journalism is typically a supervised craft, paid and made by news-workers (**Kim**; **Lowrey**, 2015). When it comes to professional practices, professional journalists typically work within well-ingrained journalistic norms and routines, guided by values of news objectivity, autonomy and accuracy. Likewise, professional journalists have a clear orientation to serve the public, acting as a watchdog of powerful institutions (**Kim**; **Lowrey**, 2015).

In contrast to professional journalism, citizen journalism does not have a central media company controlling the information flow (**Nah** *et al.*, 2015). As non-professionals that engage in news creation, citizen journalists have the power of selecting and deciding how and what information should be covered (**Lindner**, 2016), but the associated practices for news reporting tend to be unsystematic, as they lack widely agreed-upon principles and guidelines (**Kim**; **Lowrey**, 2015). As result, professional journalists typically consider citizen journalism as an unethical and untrustworthy activity with poor technical quality (**Pantti**; **Bakker**, 2009).

Interestingly, and in contrast to traditional normative considerations, a growing number of scholars have started to theorize citizen journalism as a counterpart of professional journalism. In this logic, some scholars suggest that citizen journalism may serve to break the rigid structures of well-established news organizations, using sources beyond the elites usually consulted by professional news-workers, and covering risky or alternative social phenomena (**Wall**, 2015). Fruit of these theoretical discussions, a score of studies has emphasized that beyond the news making practices associated to the basic tenets of both citizen and professional journalism, what really substantiates professional journalism's critical response is their reluctance to share their social capital as opinion leaders (**Singer**; **Ashman**, 2009).

In summary, while the initial routes of both approaches were sometimes conflicting or divergent, the growing use of social media for news and the innovative spaces enabled by new media, opened up new domains of collaboration, creating as a result "pockets of collaborative journalism" (**Canter**, 2013, p. 1106). It is in this context that the interactions between citizen and professional journalism became much more naturalized and, in some occasions, the former was seen as a source of renewal and complemental symbiosis, boosting the paths to civic life (**Deuze**; **Bruns**; **Neuberger**, 2007). Such interactions between both, may foster citizens perceptions on the role of journalism and journalists in society, triggering citizens' disposition to produce news contents and emulate their professional practices.

3. Citizens' professional journalism perceptions and citizens' content creation

A sizable literature has problematized the roots and tenets that sustain both professional and citizen journalism (**Deuze**; **Bruns**; **Neuberger**, 2007). There is also considerable amount of research on the potential interactions between both strands of journalism (**Canter**, 2013), aiming at shedding light on the normative implications of such collaborations. However, until date, there is a surprising lack of empirical studies on how citizens' perceptions of professional journalism may foster or hinder citizens' news content creation. It could be argued that professional journalists may play an important role in invigorating citizens' content creation if their professional practices are positively appraised. In fact, as suggested by the Theory of planned behavior (**Madden**; **Ellen**; **Ajzen**, 1992), citizens' appraisals or attitudes toward a certain behavior is fundamentally determined by their beliefs and expectations about such behavior. In this case: A belief is the subjective probability that such behavior produces an expected outcome (i.e. producing news contents and be publicly acknowledged for that).

Extant studies on audience research has also provide empirical evidence to the potential connection between citizens' perceptions about journalism and their media behavior. For instance, according to **Fletcher** & **Park** (2017), when citizens report higher levels of trust in journalists they also consume more news. Likewise, **Gil de Zúñiga** and **Hinsley** (2013) showed that holding positive perceptions about journalists and their professional practices positively influenced citizens' news consumption habits. Therefore, how people cognitively appraise journalists, their practices, and their performance in society explains to a great extent citizens' potential news behavior. One such behavior may relate to news content creation. In this logic, a positive perception on professional journalists and their role in society might lead to higher chances of public participation via news production. However, in a context of job losses and market turbulence, why do citizens may positively appraise journalists' performance and their associated practices?

Despite the growing scholarly and political voices that alert about the erosion on the craft of journalism, the underpinnings and associated practices of the field are still robust. Journalism plays a fundamental role in the accountability of liberal democracies and, in a context of massive misinformation and fake news across social media, the news industry (including public service media) plays a fundamental role in providing trustful information to society at large. According to recent market research (*Digital news report*, 2018), four out of ten Spaniards express a general trust in the news. Trust is naturally higher for the news sources citizens regularly turn to, while news exposure via social media and found through search engines are significantly less trusted. In terms of brands trust scores, the most known ones (including private and public television broadcasts, legacy newspapers and native online newspapers), are between 5.57 and 6.37 if citizens have heard about them and between 6.84 and 7.06 if they use them regularly (in a 0-10 scale). In addition, Spaniards' average trust score of their news diets is 6.02, ranked fourth in all countries covered by the *Digital news report*. All in all, and despite all economic and structural challenges that face Spanish journalism, citizens' trust in journalism and their role in shaping an informed society is relatively high.

In summary, and as suggested by extant research, how citizens appraise journalists may impact on how citizens' shape their behavior. Citizens that perceive that journalists are correctly performing their role as watchdogs may be because they appraise the positive influence of journalists in fostering civic values and a better democracy. By positively appraising journalists' performance (for instance in informing about hidden phenomena or finding the truth and presenting it to the public), citizens' may be motivated to participate and emulate professional journalism and thus sharing the positive social capital as opinion leaders/setters (**Singer**; **Ashman**, 2009). Accordingly, we may expect that such perceptions towards journalism and their performance may affect Spaniards likelihood of engaging in news content creation. In a more formal hypothesis:

H1) Citizens' positive perceptions on professional journalism are positively related to citizens' content creation.

4. News consumption and citizens' content creation

Extant research on political communication has provide strong correlational and experimental evidence regarding the connection between media consumption and citizens' participation. Whether by means of traditional or new digital services, research on political communication shows that news use facilitates participation in many different ways: increasing knowledge about public affair and politics, providing mobilizing information, and energizing partisan involvement (**Delli-Carpini**; **Keeter**, 1996; **Lemert**, 1992). In this regard, there is a vast body or research demonstrating that news exposure through the internet, traditional media, and social media platforms are positive predictors of online and offline political participation and civic engagement (**Bakker**; **De-Vreese**, 2011).

However, individual or collective activities related to civic engagement or political participation not only include traditional manifestations like attending town hall meetings, donating to charities or working in a community project. As extant research has shown, civic participation activities also include meeting the responsibilities of a dutiful citizen (**Bennett**; **Wells**; **Rank**, 2009). Accordingly, different social, political or cultural activities (such as voting, joining interest groups, follow the news, etc.) may enlarge citizens' participatory repertories and thus enrich the public discourse. One of these prosocial activities may be also related to citizens' content creation, a specific form of participation that encompasses the creation of news pieces accounting for certain aspects of the political, social, cultural or economic reality.

In this sense, Prior literature showcased robust empirical evidence on the main individual motivations to engage in such activities. Some of the most central motivations include self-expression and willingness to communicate citizens' views about mainstream news contents (**Bruns**, 2008), or the identification of hidden phenomena not covered by online and traditional media (**Wall**, 2015). As addressed by extant research on political communication and citizen journalism, active users of social media and who have more political knowledge are more likely to create their own news contents. Moreover, there is robust evidence that highly active political users tend to be deliberative, discuss politics and exert many other democratic skills (**Kim**; **Lowrey**, 2015). Thus, we would expect that a stronger social media and traditional news use will positively correlate with increased levels of citizens' content creation. Based on these findings and theoretical explanations, the following hypotheses are given:

H2) Social media use for news will be positively related to citizens' content creation.

H3) Traditional media consumption will be positively related to citizens' content creation

In order to account for the boundary conditions by which social media news use and traditional media use may (additively) explain the relationship between citizens' perceptions of professional journalists and citizens' content creation, a theoretical framework must be first outlined. We argue that the media repertoire approach to news consumption may be an appropriate set of analytical tools to theoretically explain how and why the different modes of news consumption may shape citizens' media perceptions and behavior.

Previous studies on media use have tried to explore changes in news consumption patterns in several ways, both qualitatively and quantitatively in order to establish empirical claims about what current news consumption looks like (**Swart**; **Peters**; **Broersma**, 2016). On the one hand, traditional studies on media use focuses on the use of single media types, genres or products (**Hasebrink**; **Domeyer**, 2012), neglecting as a result the interrelations and uses amongst these different media. On the other hand, a second strand of research considers the multiple and small subsets or "repertoires" of users' preferred news media (**Van-Damme** *et al.*, 2015). This second perspective offers a holistic view to investigate the combination of different news sources, rather than looking at which single source or medium may be potentially eclipsing the other (**Van-Damme** *et al.*, 2015). In general terms, the media repertoire refers to the entirety of media a user regularly uses (**Hasebrink**; **Domeyer**, 2012).

In a context of digital transformation, the repertoire approach has gained important scholarly attention as it assumes that news consumption is not "a simple choice between traditional and new media" (**Van-Damme** *et al.*, 2015, p. 197). Audiences are thus empowered to create, compose and select different news sources into complex patterns of media use. As **Van Damme** *et al.*, (2015, p. 197), suggest, users may "compose a diet surpassing the dichotomy "traditional versus new" news media, both on the level of technology (newspaper *vs.* tablet) and content (established news brands vs. new market players". Recent qualitative and quantitative research have applied this approach to the study of news consumption, identifying different types of news users based on the repertoires they have (**Picone**; **Courtois**; **Paulussen**, 2015; **Van-Damme** *et al.*, 2015; **Swart**; **Peter**; **Broersma**, 2016).

For instance, **Swart**, **Peter** and **Broersma** (2016), analyzing the value of different platforms, genres and practices found five distinct news media repertoires, suggesting that users do not always use what they prefer, nor do they prefer what they use. In the same vein, **Van-Damme** *et al.* (2015), examining the impact of mobile news consumption on news media repertoires, found three types of news consumers, arguing that news readers fundamentally rely on traditional outlets, only to supplement with online mobile services at specific circumstances.

Following the media repertoire approach, we also expect that both social media use for news and traditional news consumption will positively and additively moderate the relationship between citizens' perceptions on professional journalism and citizens' content creation. We argue that the myriad of news consumption modes and affordances that enable social media platforms may permeate new boundary conditions to examine the effects of citizens' perceptions and behavior. In fact, there is a considerable body of work detailing the contingent role of social media use and traditional media use in accounting citizens' political and social behavior in different settings (**Holton** *et al.*, 2015). Accordingly, it might be expected that traditional and media use may also play an additive role in accounting for the relationship between citizens' perceptions on journalists' performance and content creation.

Specifically, both social media and traditional media news use become complemental sources of news consumption, enriching the overall information ecosystem. According to the media repertoire approach, sheer exposure to more sources or media platforms would provide an additive possibility for citizens to learn about public affairs and politics (**Van-Damme** *et al.*, 2015), enriching the news diversity and public discourse. For the most part, citizens do not solely rely on one single news source but rather on a combination of media sources or information platforms to be fully informed (**Hasebrink**; **Domeyer**, 2012; **Van-Damme** *et al.*, 2015). Assuming the central role of social and traditional media news use in the media repertoire of most citizens (**Schrøder**, 2015), such news consumption may amplify citizens' perceptions on the role of journalists in society. In fact, citizens that trust news and news-workers and therefore have better perceptions on their role and practices, consume more news through different sources (**Fletcher**; **Park**, 2017). In the digital realm, social media became a fundamental source of intentional or accidental information, shaping readers' knowledge about current events and politics (**Masip** *et al.*, 2015). In short, both traditional and social media news for news, shape citizens' modes of news consumption, and represent fundamental stimulus for citizens' appraisals of journalists' performance.

As suggested by the theory of planned behavior, if appraisals of journalists' performance are positive, such perceptions may influence citizens behavior towards journalism, increasing the likelihood of engaging in news production. Accordingly, considering the role of social and traditional media in informing citizens and the extent to which these modes of consumption permeate citizens' cognitive appraisals on journalists' performance and their practices, it stands to reason that both may positively and additively moderate the relationship between citizens perceptions and their likelihood of create news contents. In a more formal hypothesis.

> H4) Social and traditional media news use additively moderate the relationship between citizens' perceptions on journalist performance and citizens' content creation.

5. Methods

5.1. Sample

Data for this study comes from an online survey. The survey was performed from September 14-24, 2015 and administered by *Nielsen* using stratified quota sampling techniques to create a sample with demographics that match official census numbers as closely as possible. Therefore, we did not calculate response rates (*Aapor*, 2011), but cooperation rates (average 77% across the panel). In the case of Spain, 1,020 respondents were included in the final sample (see Table 1 for the demographic breakdown).

Table 1. Demographic breakdown by age, gender, education, homeownership and marital status.
Note. Census data reported in parenthesis, based on official estimates.

Age	
18-24	11.7 (7.4)
25-34	21.9 (14.9)
35-44	26.4 (16.6)
45-64	28.6 (34.3)
65+	2.5 (15.6)
Gender	
Female	51.7 (50.6)
Male	46.5 (49.3)
Education	
High school or less	18.6 (46)
Some college	44.1 (22.1)
College degree +	37 (31.9)
Graduate degree +	-
Homeownership	
Own	77.7 (79.7)
Rent	21.4 (20.3)
Marital status	
Married	62.4 (54.6)
Divorced	6.4 (5.2)
Single	29.6 (32.4)
Widowed	1.3 (7.6)

5.2. Independent and dependent variables

This study had two main objectives.

- First, we wanted to explore the lineal relationship between citizens' perceptions on journalists' performance and citizens' news production.
- Second, we examined if this relationship is moderated by two additive moderators: social media use for news and traditional news use.

Thus, our model includes citizens' news production as independent variable (*X*), citizens' news production as dependent variable (*Y*) and two additive moderators, social media use for news (*W*) and traditional news use (*Z*). Accordingly, the paper includes a series of measures of these constructs, considered as key variables as well as some demographics as controls.

5.3. Variables of interest

Citizens' perceptions on professional journalism

Four items asked respondents how well they think journalist "function as the watchdog for the public", "perform in verifying facts", "perform in being objective" and "do in covering stories that should be covered" (four-item averaged scale, 1 = not at all to 7 = completely; Cronbach's α = .88; *M* = 3.63; *SD* = 0.16).

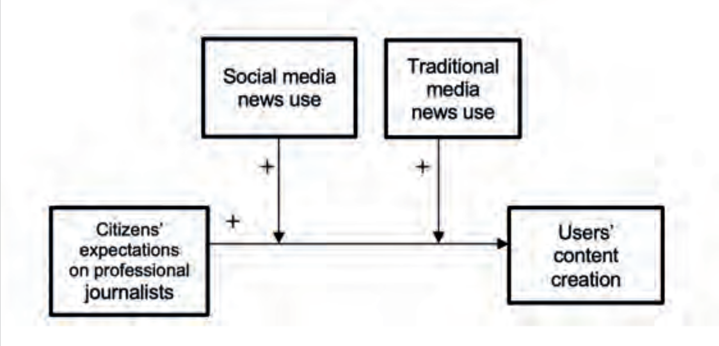


Figure 1. Additive moderation model of social media use for news and traditional media use

Citizens' content creation

Four items asked respondents how often they 'take part in posting or sharing photos, videos, memes, or gifs created by [them] that relate to current events or politics', 'create and upload [thei]r own videos', 'upload [thei]r own photos (to services like *Instagram*, *Pinterest*, or *Facebook*)', and 'write posts on [thei]r own blog' (four-item averaged scale, 1 = never to 7 = all the time; Cronbach's α = .81; *M* = 3.08; *SD* = 0.84).

Social media use for news

Respondents were asked questions related to news consumption on social media, including *Facebook*, *Twitter*, *Google+*, *Pinterest*, *Instagram*, *Tumblr*, and *Reddit*. Specifically, three items asked respondents how often they use social media "to stay informed about current events and public affairs", "to stay informed about my local community" and "to get news from professional news services" (three-item averaged scale, 1 = never to 7 = always, Cronbach's α = 0.90; mean = 4.17, SD = 0.20).

Traditional media use

Respondents were asked questions related to news consumption on traditional media, including TV, radio and newspapers (three-item averaged scale, 1 = never to 7 = all the time, Cronbach's α = 0.75; mean = 4.7, SD = 0.65).

5.4. Control variables

In order to control for potential confounders, our statistical models a variety of variables that may explain relationships between the variables of interest. The first set of controls includes socio-demographic variables: age (mean = 40.94 SD = 12.62), gender (46.6 percent males), income, and race. Finally, we controlled for political interest (two items asked respondents "how closely do they pay attention to information about what's going on in politics and public affairs" and "how interested are they in information about what's going on in politics and public affairs" (two-item averaged scale, 1 = not at all to 7 = a great deal, Spearman Brown coefficient = 0.94; mean = 4.7, SD = 0.65).

5.5. Statistical analysis

In order to test our hypotheses, we conducted a hierarchical OLS regression analysis with citizen news production as dependent variable. The independent variables were introduced in four different blocks. The first block of variables comprised the set of demographics, the second included social antecedents, and the third comprised our variables of interest: citizens' perceptions on journalists' performance, social media use for news and traditional media use. Finally, we tested the additive moderation effects of social and traditional media news use on the relationship between citizens' perceptions on professional journalism and citizens' content creation, using the *Process* macro in *SPSS* (**Hayes**, 2013; Model 2; 5.000 bootstrap samples).

6. Results

The first hypothesis (H1) proposed that citizens that reported higher perceptions on professional journalist will be more prone to create news contents. The regression analysis, depicted in table 2, shows that, according to H1, citizens that perceive that journalist are performing well their craft, are more likely to create their own contents (β = .075, p < 0.05). Male (β = -.020, p < .01), white (β = -.776, p < .01), younger adults (β = -.368, p < .01) and interest in politics (β = .266, p < .01) were also likely to answer that they created their own news contents. H2 and H3 predicted that users that reported higher use of social and traditional media news use are more prone to create their own news contents. Corresponding with H3, a higher use of social media for news predicts citizens content creation (β = .443, p < .01). However, this is not meet for traditional media consumption. Therefore, H2 was supported, while H3 was not.

H4 predicted and additive moderation. Specifically, this model was tested to examine the collective (or additive) moderating effects of social and traditional media news use on the relationship between citizens' perceptions on professional journalism and citizens' news creation. Table 2 shows a positive, statistically significant additive moderation effect of both moderators (social media news use: β = .067, p < .01; traditional media use: β = .0701, p < .05).

Table 2. Zero order correlations

	Mean	SD	Age	Income	Political interest	Journalists performance	Social media news use	Traditional media use	Citizen news production
Age	40.94	12.62	-						
Income	2.97	1.08	.071*	-					
Political Interest	4.60	1.40	.208**	.199**	-				
Journalism Performance	3.63	1.12	.001	.008	.079*	-			
Social Media News Use	4.17	1.55	-.128	-.022	.171**	.189**	-		
Traditional Media Use	4.73	1.24	.209**	.224**	.340**	.154**	.186**	-	
Citizens' Content Creation	2.78	1.49	-.165**	.034	.157**	.159**	.500**	.146**	-

Table 3. Hierarchical regression predicting users' content creation

	Citizens' news content creation	
	Main effects	Interaction terms
Block 1: Demographics		
Age	-.165**	-.016**
Gender (male)	-.122**	-.401**
Income	.046	.032
Race (white)	-.100**	-.669*
ΔR^2 (%)	5.0%	
Block 2: Social antecedents		-
Political interest	.246**	.129**
ΔR^2 (%)	10.4%	-
Block 3: Variables of interests		
Citizens' perceptions on professional journalism	.065*	.059
Social media use for news	.457**	.442**
Traditional media use	.033	.051
ΔR^2 (%)	31.1%	-
Block 4: Interaction terms		
Citizens' perceptions on professional journalism * Social media use for news	-	.067**
Citizens' perceptions on professional journalism * Traditional media use	-	.070*
Additive effect (ΔR^2)	-	1.4%*
Total R^2 (%)	32.0%	

Cell entries are final-entry OLS standardized coefficients. *p < .05, **p < .01

As can be seen from figure 1, the effect of citizens' perceptions on journalists' performance on citizens' news creation varies depending on the level social and traditional media news use. Therefore, the effect is not stagnant at all levels. Specifically, it is apparent from figure 1, that the effect of citizens' perceptions on professional journalism on citizens' news creation is larger for higher social media use for news at all levels of traditional news use. However, when the level of social media use for news is moderate, and the levels of traditional media use is low, the relationship between citizens' perceptions on professional journalism and citizens' content creation is negative. Similar patterns can be observed for low and moderate levels of social media news use at low and moderate levels of traditional media news use. On the contrary, low and moderate use of social media for news at high levels of traditional media use positively affects the relationship between our independent and dependent variable. In short, higher use of both social and traditional media for news, additively moderate the relationship between citizens' perceptions on professional journalism and citizens' content creation.

7. Discussion

With the growing consolidation of digital technologies and social media platforms for news distribution and consumption, the boundaries of professional journalism have partially been diluted. Citizens' political participation, civic discussions and news content creation on social media, have challenged the unidirectionality and traditional roles of professional journalism (**Kim**; **Lowrey**, 2015), triggering new pockets of collaboration in which both professional and citizen journalism interact to enrich the diversity of citizens' news repertoires (**Canter**, 2013). Based on representative survey data from

Spain, this study seeks to advance our understanding on the potential effects of citizens' perceptions on their media-related behavior. Specifically, this study seeks to delve deepen on how citizens' perceptions on professional journalism and media use (i.e. social and traditional media news use) may explain citizens' news production. Our study contributes to current normative discussions on the relationship between professional and citizens journalism, providing three inter-related insights to this line of inquiry.

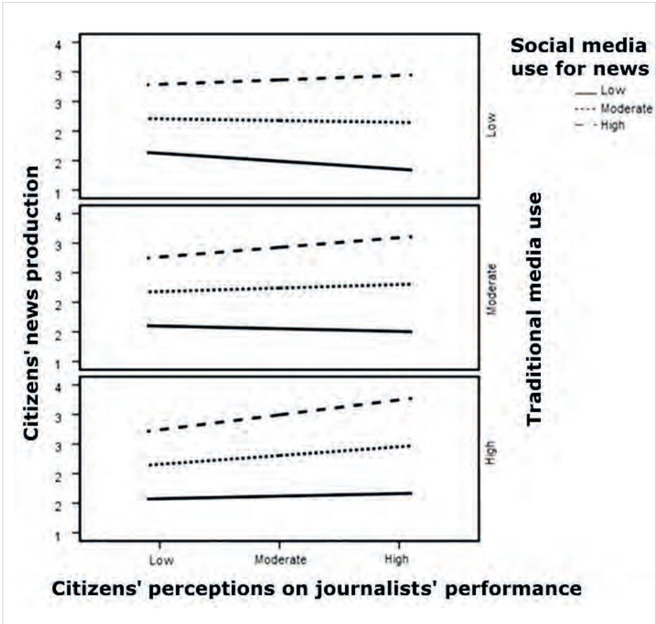


Figure 2. The figure shows the additive interaction term of social media use for news (moderator 1) and traditional media use (moderator 2) on the relationship between citizens' perceptions on journalist performance and citizens' news production.
Note. Group differences in social media use for news, traditional media use and citizens' perceptions on journalist performance are the mean and ± 1 SD from the mean.

First, the empirical testing of our theoretical model indicates that citizens' positive perceptions on professional journalism lead to higher chances of producing news contents. Our findings thus illustrate the crucial role of citizens' perceptions about journalism in explaining their behavior. As suggested by the theory of planned behavior (**Madden**; **Ellen**; **Ajzen**, 1992), perceptions and attitudes towards an activity crucially determine citizens' behavior. In the case of journalism, citizens that hold a positive perception on the role performance of Spanish journalists, are more inclined to provide their individual perspectives through new-related contents. It could be argued that positive perceptions on the central role of journalists in informing society and the cognitive appraisals on such performance may stimulate or motivate citizens to engage in the news production. Moreover, as citizens' perceptions led to media related behavior, the normative disconnection between citizens and professional journalism could be indirectly challenged.

Interestingly, what explains citizens' content creation is their positive perceptions of journalists' performance, not the negative ones. According to prior works (**Bruns**, 2008), determinant motivators to engage in news production include not only internal factors related to personal self-expression or exert political influence, but also negative appraisals on how citizens perceive journalists are covering social reality (**Wall**, 2015). Therefore, what our findings illustrate is the potential normative connection between professional and citizens journalism, as a crucial motivator to create news contents is citizens' positive cognitive appraisals of journalists' performance. However, the nature of our data precludes us to establish further theoretical implications germane to how these perceptions are practically implemented in the news produced. Therefore, future studies may consider, for instance, whether professional journalists are considered as role models and the extent to which citizens are willing to follow the norms and values that shape professional journalism. As far as our study is concerned, our findings provide initial empirical evidence on the relationship between citizens' perceptions and news content production.

Second, our study empirically tests how traditional and social media use for news affect citizens' content creation. A good deal of research has empirically shown the positive effects that media consumption (including traditional and social media) exerts on different forms of participation by increasing knowledge about public affairs and politics (**Delli-Carpini**; **Keeter**, 1996; **Lemert**, 1992). However, the potential connection between media consumption and citizens' content creations has been overlooked, remaining blurred the media effects at the level of journalism production. Our study contributes to this line of inquiry empirically showing that despite the growing role of different media platforms in shaping citizens' media consumption habits, only high levels of social media use for news (and not traditional news consumption) affect citizens' level of news content creation directly. Therefore, our results point to the crucial role of social media platforms accounting for citizens' media behavior and, specifically, their levels of news content creation. In this logic, we argue that as social media use for news will increase, their potential power to encourage or to empower citizens to produce news contents through these platforms will positively correlate.

However, although we expected a positive relationship between traditional media news use and citizens' content creation, the regression analysis revealed a statistically non-significant relation. This may be consequence of the changing patterns of news consumers, in which the robustness of traditional media is being displaced and challenged by new digital platforms that articulate a complemental news repertoire (**Van-Damme** *et al.*, 2015). In this sense, scholars on audience research have shown the declining role of traditional media in shaping citizens consumption habits, which may explain why such media yields a non-significant effect on citizens' content creation.

Third, and finally, our study underscores the boundary conditions in which citizens' perceptions on journalism performance affect citizens' content creations. Specifically, we show how social and traditional media news use help to further explain this relationship, positively moderating the effect of citizens' perceptions over news content creation in an "additive way". Simply put, the effect of citizens' perceptions on professional journalism over citizens' news creation is larger for higher social media use for news at all levels of traditional news use. Therefore, both traditional and social media for news serve to amplify citizens' cognitive appraisals of journalists' performance, significantly and additively affecting citizens' news content creation. In short, our study demonstrates that consumption matters when explaining perceptions on journalism and individual behavior.

We argue that this additive effect is product of the complemental role of both social and traditional new use in shaping a media repertoire (**Schrøder**, 2015), as they are key to keep many citizens informed about current events and politics and crucial in how citizens cognitively appraise journalist's performance and their associated practices. Therefore, consistent with previous studies on the media repertoire approach (Swart; Peter; Broersma, 2016), this article shows how this literature is a relevant framework to study potential associations between citizens' perceptions on journalism and their potential behavior.

Several limitations of the current analysis are also noteworthy. First, the cross-sectional nature of the survey data does not allow us to identify with certainty the direction of the causal patterns underlying the correlations that we found. Therefore, we cannot rule out the possibility that the causal orders are reversed. More robust causal claims would be warranted by longitudinal or experimental studies, rather than cross-sectional survey data. All in all, more work is needed to disentangle the causal mechanisms behind the correlations presented here. Thus, the relationships theorized in this paper should be interpreted with caution. Future research may adopt a longitudinal design to draw causal inferences with greater confidence. Second, although the robustness and representativeness of our data is warranted, data was collected in 2015, limiting the contemporaneity of our findings. Therefore, future studies may examine the relationships here presented with more recent survey data.

Finally, at the level of practice, this study represents a stimulus for professional journalists' role in society, as their "good" performance is a crucial path to civic involvement in the news making process. Beyond the critical voices inside and outside the journalistic field that emphasize the lost in news trust and journalists' declining role as opinion leaders, our findings address that their practices, performance and professional work matter when it comes to foster participation in terms of content creations.

7. References

American Association of Public Opinion Research (2011). *Standard definitions: Final dispositions of case codes and outcome rates for surveys*.
http://aapor.org/Content/NavigationMenu/AboutAAPOR/StandardsampEthics/Standardefinitions/StandardDefinitions2011.pdf

Bakker, Tom; **De-Vreese, Claes** (2011). "Good news for the future? Young people, Internet use, and political participation". *Communication research*, v. 38, n. 4, pp. 451-470.
https://doi.org/10.1177/0093650210381738

Bennett, Lance; **Wells, Chris**; **Rank, Allison** (2009). "Young citizens and civic learning: Two paradigms of citizenship in the digital age". *Citizenship studies*, v. 13, n. 2, pp. 105-120.
https://doi.org/10.1080/13621020902731116

Bruns, Axel (2008). *Blogs, Wikipedia, Second Life, and beyond: From production to produsage*. New York: Peter Lang.

Canter, Lily (2013). "The source, the resource and the collaborator: The role of citizen journalism in local UK newspapers". *Journalism*, v. 14, n. 8, pp. 1091-1109.
https://doi.org/10.1177/1464884912474203

Cruz-Álvarez, Jesús; **Suárez-Villegas, Juan-Carlos** (2017). "Pautas deontológicas para el periodismo digital". *El profesional de la información*, v. 26, n. 2, pp. 249-254.
https://doi.org/10.3145/epi.2017.mar.11

Delli-Carpini, Michael; **Keeter, Scott** (1996). *What Americans know about politics and why it matters*. Michigan: Yale University Press.

Deuze, Mark; **Bruns, Axel**; **Neuberger, Christoph** (2007). "Preparing for an age of participatory news". *Journalism practice*, v. 1, n. 3, pp. 322-338.
https://doi.org/10.1080/17512780701504864

Gil de Zúñiga, Homero; **Hinsley, Amber** (2013). "The press versus the public: What is "good journalism?". *Journalism studies*, v. 14, n. 6, pp. 926-942.
https://doi.org/10.1080/1461670X.2012.744551

Goyanes, Manuel; **Rodríguez-Gómez, Eduardo-Francisco** (2018). "Presentism in the newsroom: How uncertainty redefines journalists' career expectations". *Journalism*, Ahead of print.
https://doi.org/10.1177/1464884918767585

Fletcher, Richard; **Park, Sora** (2017). "The impact of trust in the news media on online news consumption and participation". *Digital journalism*, v. 5, n. 10, pp. 1281-1299.
https://doi.org/10.1080/21670811.2017.1279979

Hasebrink, Uwe; **Domeyer, Hanna** (2012). "Media repertoires as patterns of behavior and as meaningful practices: A multimethod approach to media use in converging media environments". *Participations*, v. 9, n. 2, pp. 757-779.
https://bit.ly/3kaEwyh

Holton, Avery; **Coddington, Mark**; **Gil de Zúñiga, Homero** (2013). "Whose news? Whose values? Citizen journalism and journalistic values through the lens of content creators and consumers". *Journalism practice*, v. 7, n. 6, pp. 720-737.
https://doi.org/10.1080/17512786.2013.766062

Holton, Avery; **Coddington, Mark**; **Lewis, Seth**; **Gil de Zúñiga, Homero** (2015). "Reciprocity and the news: The role of personal and social media reciprocity in news creation and consumption". *International journal of communication*, n. 9, pp. 2526-2547.
https://doi.org/10.1080/17512786.2013.766062

Jones, Sydnei; **Fox, Susannah** (2009). *Generations online in 2009*. Washington, DC: Pew Internet & American Life Project, pp. 1-9.
https://www.pewresearch.org/internet/2009/01/28/generations-online-in-2009

Kim, Yeojin; **Lowrey, Wilson** (2015). "Who are citizen journalists in the social media environment? Personal and social determinants of citizen journalism activities". *Digital journalism*, v. 3, n. 2, pp. 298-314.
https://doi.org/10.1080/21670811.2014.930245

Lenhart, Amanda; **Horrigan, John**; **Fallows, Deborah** (2004). *Content creation online*. Washington, DC: Pew Internet & American Life Project.
https://www.pewresearch.org/internet/2004/02/29/content-creation-online

Lindner, Andrew (2017). "Editorial gatekeeping in citizen journalism". *New media & society*, v. 19, n. 8, pp. 1177-1193.
https://doi.org/10.1177/1461444816631506

Madden, Thomas; **Ellen, Pamela**; **Ajzen, Izek** (1992). "A comparison of the theory of planned behavior and the theory of reasoned action". *Personality and social psychology bulletin*, v. 18, n. 1, pp. 3-9.

Masip, Pere (2016). "Investigar el periodismo desde la perspectiva de las audiencias". *El profesional de la información*, v. 25, n. 3, pp. 323-330.
https://doi.org/10.3145/epi.2016.may.01

Masip, Pere; **Guallar, Javier**; **Suau, Jaume**; **Ruiz-Caballero, Carlos**; **Peralta, Miquel** (2015). "News and social networks: audience behavior". *El profesional de la información*, v. 24, n. 4, pp. 363-370.
https://doi.org/10.3145/epi.2015.jul.02

Nah, Seungahn; **Yamamoto, Masahiro**; **Chung, Deborah**; **Zuercher, Robert** (2015). "Modeling the adoption and use of citizen journalism by online newspapers". *Journalism & mass communication quarterly*, v. 92, n. 2, pp. 399-420.
https://doi.org/10.1177/1077699015574483

Pantti, Mervi; **Bakker, Piet** (2009). "Misfortunes, memories and sunsets: Non-professional images in Dutch news media". *International journal of cultural studies*, v. 12, n. 5, pp. 471-489.
https://doi.org/10.1177/1367877909337860

Picone, Iker; **Courtois, Cédric**; **Paulussen, Steve** (2015). "When news is everywhere: Understanding participation, cross-mediality and mobility in journalism from a radical user perspective". *Journalism practice*, v. 9, n. 1, pp. 35-49.
https://doi.org/10.1080/17512786.2014.928464

Schrøder, Kim (2015). "News media old and new: Fluctuating audiences, news repertoires and locations of consumption". *Journalism studies*, v. 16, n. 1, pp. 60-78.
https://doi.org/10.1080/1461670X.2014.890332

Scott, Jonathan; **Millard, David**; **Leonard, Pauline** (2015). "Citizen participation in news: An analysis of the landscape of online journalism". *Digital journalism*, v. 3, n. 5, pp. 737-758.
https://doi.org/10.1080/21670811.2014.952983

Singer, Jane; **Ashman, Ian** (2009). "'Comment is free, but facts are sacred': User-generated content and ethical constructs at the Guardian". *Journal of mass media ethics*, v. 24, n. 1, pp. 3-21.
https://doi.org/10.1080/08900520802644345

Swart, Joëlle; **Peters, Chris**; **Broersma, Marcel** (2017). "Repositioning news and public connection in everyday life: A user-oriented perspective on inclusiveness, engagement, relevance, and constructiveness". *Media, culture & society*, v. 39, n. 6, pp. 902-918.
https://doi.org/10.1177/0163443716679034

Toff, Benjamin; **Nielsen, Rasmus** (2018). "'I just Google it': Folk theories of distributed discovery". *Journal of communication*, v. 68, n. 3, pp. 636-657.
https://doi.org/10.1093/joc/jqy009

Túñez-López, José-Miguel; **Toural-Bran, Carlos**; **Cacheiro-Requeijo, Santiago** (2018). "Uso de bots y algoritmos para automatizar la redacción de noticias: percepción y actitudes de los periodistas en España". *El profesional de la información*, v. 27, n. 4, pp. 750-758.
https://doi.org/10.3145/epi.2018.jul.04

Van-Damme, Kristin; **Courtois, Cédric**; **Verbrugge, Karel**; **De-Marez, Lieven** (2015). "What's APPening to news? A mixed-method audience-centred study on mobile news consumption". *Mobile media & communication*, v. 3, n. 2, pp. 196-213.
https://doi.org/10.1177/2050157914557691

Wall, Melissa (2015). "Citizen journalism: A retrospective on what we know, an agenda for what we don't". *Digital journalism*, v. 3, n. 6, pp. 797-813.
https://doi.org/10.1080/21670811.2014.1002513

Comunicación de crisis (2008-2018). Revisión de los principales avances de conocimiento empírico en gestión de comunicación

Crisis communication (2008-2018). Review of the main advances in empirical knowledge in communication management

Noelia Zurro-Antón; María-Ángeles Moreno; María-Cristina Fuentes-Lara

Cómo citar este artículo:

Zurro-Antón, Noelia; **Moreno, Ángeles**; **Fuentes-Lara, María-Cristina** (2021). "Comunicación de crisis (2008-2018). Revisión de los principales avances de conocimiento empírico en gestión de comunicación". *Profesional de la información*, v. 30, n. 1, e300107.

https://doi.org/10.3145/epi.2021.ene.07

Artículo recibido el 16-05-2020
Aceptación definitiva: 03-10-2020

Noelia Zurro-Antón ✉
https://orcid.org/0000-0002-2787-0239

Universidad Rey Juan Carlos
Escuela Internacional de Doctorado
Camino del Molino, 5
28943 Fuenlabrada (Madrid), España
n.zurro.2018@alumnos.urjc.es

María-Ángeles Moreno
https://orcid.org/0000-0002-0777-2957

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28943 Fuenlabrada (Madrid), España
mariaangeles.moreno@urjc.es

María-Cristina Fuentes-Lara
https://orcid.org/0000-0003-3198-7701

Universidad Francisco de Vitoria
Ctra. Pozuelo a Majadahonda, Km 1.800.

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28943 Fuenlabrada (Madrid), España
cristina.fuentes@urjc.es

Resumen

La mayoría de las organizaciones se enfrentan a situaciones de crisis que ponen en peligro la confianza de sus grupos de interés. La comunicación de crisis se ha convertido en una de las áreas más prominentes tanto en la práctica como en la investigación de relaciones públicas. Este estudio presenta un análisis cuantitativo sobre la investigación científica reciente en comunicación de crisis, con el fin de recoger el estado y los principales avances actuales en esta área. Para ello, se han seleccionado artículos de revistas presentes en seis bases de datos internacionales destacadas: *ProQuest Research Library*, *ABI/Inform Collection*, *EBSCOhost Academic Search Complete*, *EBSCOhost Business Source Complete*, *EBSCOhost Communication & Mass Media Complete* y *Elsevier ScienceDirect Journals Complete*. En concreto, se han recogido y analizado 143 artículos científicos publicados entre 2008 y 2018 en seis revistas internacionales revisadas por pares referentes de relaciones públicas y comunicación de crisis, así como la principal de gestión de crisis, incluidas en las bases de datos de evaluación *Journal Citation Reports* (*JCR*) y *Scopus-CiteScore*: *Public relations review*, *Journal of contingencies and crisis management*, *Corporate communications*, *Journal of public relations research*, *Journal of communication management* e *International journal of strategic communication*. La revisión de los textos ha desembocado en el establecimiento de cinco preguntas de investigación, correspondientes a seis objetivos. La técnica cuantitativa empleada ha sido el análisis de contenido, que se ha enfocado sobre los siguientes elementos: temas, teorías, métodos, resultados y características geo-culturales de los autores. Los resultados muestran las tendencias investigadoras del área en la última década.

Palabras clave

Análisis de contenido; Investigación; Relaciones públicas; Empresas; Comunicación de crisis; Gestión de comunicación; Comunicación estratégica; Comunicación institucional; Comunicación corporativa; Avances; Tendencias; Organizaciones; Confianza; Grupos de interés.

Abstract

Most organizations face crisis situations that jeopardize the trust of their stakeholders. Crisis communication has become one of the most prominent areas both in practice and in public relations research. This study presents a quantitative analysis of recent scientific research in crisis communication to assess the situation and discover the main current advances in the area. Journal articles from six prominent international databases were selected: *Proquest Research Library*, *ABI/ Inform Collection*, *EBSCOhost Academic Search Complete*, *EBSCOhost Business Source Complete*. *EBSCOhost Communication & Mass Media Complete* and *Elsevier's Science Direct Journals Complete*. Specifically, a total of 143 scientific articles published between 2008 and 2018 were collected and analyzed from six international peer-reviewed journals specialized in public relations and crisis communication, as well as the main crisis management journals included in the *Web of Science* and *Scopus*: *Public Relations Review*, *Journal of Contingencies and Crisis Management*, *Corporate Communications*, *Journal of Public Relations Research*, *Journal of Communication Management* and *International Journal of Strategic Communication*. The review of these texts led to the establishment of five hypotheses corresponding to the six stated objectives. Content analysis was used as the quantitative technique, focusing on the following elements: themes, theories, methods, results, and geocultural characteristics of the authors. The results reveal the research trends in the area over the last decade.

Keywords

Content analysis; Research; Public relations; Companies; Crisis communication; Communication management; Strategic communication; Institutional communication; Corporate communication; Advances; Trends; Organizations; Trust; Stakeholders.

1. Introducción

En los últimos años un número notable de académicos y profesionales especializados en Comunicación resaltan el papel estratégico de la comunicación de crisis –más allá de la comunicación interna o de la externa–. Según algunos, como **Nätti**, **Rahkolin** y **Saraniemi** (2014, p. 234), una crisis es

> "un momento inesperado, negativo y serio o un proceso que amenaza el valor físico y/o inmaterial de una organización".

Los autores otorgan importancia común al área, en tanto que consideran su posible amenaza sobre las empresas. En este sentido, **Coombs** (2012, p. 2) define la crisis comunicativa organizacional de una manera similar:

> "la percepción de un evento impredecible que amenaza las expectativas importantes de los grupos de interés y puede afectar seriamente el desempeño de una organización y generar resultados negativos".

Algunos expertos de la comunicación de empresas, como Craig Sundstrom, siguen resaltando que la adversidad puede afectar diariamente a todas las organizaciones,

> "sin importar su tamaño, huella geográfica o misión" (**Sundstrom**, 2019).

Este enfoque hunde sus raíces en el carácter cuasi omnipresente de las crisis en el mundo organizacional, que lleva a las instituciones a confiar su comunicación a equipos especializados propios o externos (**Bergeron**; **Coreen**, 2012). En las últimas décadas el departamento de comunicación se ha hecho imprescindible en cualquier empresa, ampliando sus funciones en situaciones de crisis, en las que debe, entre otras cosas, proporcionar información a los medios de comunicación y no mentir para lograr controlar las situaciones negativas (**Almansa-Martínez**, 2009), episodios que se generan cada vez con mayor frecuencia. Un estudio empírico amplio en 43 países europeos publicado en el año 2014 mostró que más del 70% de los profesionales de la comunicación se enfrentan al menos a una crisis al año,

> "principalmente institucional y relacionada con el desempeño de la organización o una crisis en la administración o el liderazgo" (**Verhoeven** *et al.*, 2014, p. 107).

Los efectos de las crisis tienen una repercusión sobre la confianza de los distintos grupos de interés de las organizaciones. A mayor incertidumbre del mundo actual, más necesario se hace generar y mantener la confianza (**Valentini**; **Kruckeberg**, 2011). Sin embargo, las organizaciones no suelen tener la fortaleza necesaria para responder a los entornos de continua incertidumbre (**Taleb**, 2013). En esta línea, **Almansa-Martínez** y **Fernández-Souto** (2020) relacionan el panorama actual del sector de las Relaciones Públicas con el cambio, la incertidumbre y los retos –como la lucha contra la desinformación, el techo de cristal femenino y la implementación de nuevas tecnologías–. Estas mismas autoras recuerdan el avance generado en la profesión a partir de la crisis económica de 2008 y subrayan la necesidad de fortalecerse frente a la incertidumbre de la actual crisis generada por la pandemia Covid-19 (íbidem).

La situación paradójica anterior ha convertido la comunicación de crisis en una de las áreas de investigación más prominentes en relaciones públicas y comunicación estratégica en las últimas décadas. Para conocer en profundidad este entorno, el presente estudio revisa la producción científica y los avances producidos sobre comunicación de crisis en el período 2008-2018 mediante un análisis de contenido cuantitativo de los textos de investigación.

Objetivos

O1. El objetivo principal es conocer la producción científica de la última década (2008-2018) en gestión de la comunicación de crisis.

Derivados del anterior se plantean cinco objetivos secundarios:

O2. Conocer los temas relacionados con la comunicación de crisis más analizados en la última década, es decir, qué asuntos han sido de más relevancia para los autores.

O3. Averiguar cuáles son las teorías de comunicación más estudiadas.

O4. Identificar los métodos más empleados.

O5. Anotar los principales resultados y avances.

O6. Y atender al perfil profesional y geo-cultural de los autores con el fin de comprobar si ello afecta a su producción.

2. Marco teórico

Los autores españoles **Castillo-Esparcia** y **Carretón-Ballester** publicaron en 2010 un estudio bibliométrico cuantitativo enfocado en la comunicación de crisis, vista desde el análisis de los artículos científicos y revistas de comunicación nacionales. Tras trabajar con variables como la cantidad de artículos por número de la revista; autores por artículo; género de los autores; número de páginas; universidad o institución de los autores; temática; metodología empleada; autocitas y citas en revistas y número temático de la revista, observaron en los resultados

> "una equiparación de géneros, una media de dos investigaciones por artículo y una prevalencia de estudios cuantitativos" (**Castillo-Esparcia**; **Carretón-Ballester**, 2010, p. 289).

Estos hallazgos perfilan exhaustivamente el estado de la investigación en comunicación de crisis del periodo.

Sin embargo, cada vez son más las investigaciones publicadas que corroboran la existencia de un continuo cambio tanto en el escenario profesional como en el académico, que podrían modificar notablemente el estado de la investigación en comunicación de crisis que encontraron **Castillo-Esparcia** y **Carretón-Ballester** hace una década.

Internet, los nuevos medios y la digitalización son elementos clave en la comunicación de las empresas, que permiten el establecimiento de una comunicación más dialógica y multidireccional con los públicos de interés (**Capriotti**; **Carretón-Ballester**; **Castillo-Esparcia**, 2016). Se trata de una temática ampliamente recurrida en las investigaciones de los últimos años, debido a su transformación constante y grandes implicaciones en el desarrollo de las crisis.

> "Si observamos los datos recogidos en 2017, en este caso el tema que gira en torno a los medios digitales, conformado por internet, nuevas tecnologías y redes sociales, es el que más veces es recurrido en los artículos, con un 30% y presente en 7 de las 10 revistas" (**Castillo-Esparcia**; **Castillero-Ostio**, 2019, pp. 207-208).

Concretamente, **Eaddy** y **Jin** (2018) profundizaron en el papel de los nuevos medios online como canales de comunicación de crisis, y **Xu** y **Wu** (2015) analizaron como ejemplo el uso de la red social *Twitter* para mitigar la percepción negativa de los públicos en situaciones adversas.

Otro elemento clave a la hora de entender el estudio y control de crisis es la creación de diversas tipologías, que se han ido modificando a lo largo de la década. Una de las fuentes quizá más relevantes a consultar es el *European Communication Monitor* (*ECM*), que realiza investigaciones anuales sobre el área de la comunicación. Como apuntan **Louma-aho**, **Moreno** y **Verhoeven** (2017, p. 225), este estudio internacional presentó en 2013 una tipología básica de crisis, en la que se citan ocho tipos:

- institucionales,
- de actuación,
- de gestión o liderazgo,
- financieras o económicas,
- basadas en rumores o en fracasos de comunicación,
- de relaciones laborales,
- naturales, y
- otras crisis.

Acudiendo a fuentes individualizadas, **Kingma** (2008, p. 164) menciona en su estudio otra tipología de crisis, a partir de una revisión bibliográfica de artículos previos de finales de los años noventa:

- los desastres creados por los humanos,
- los accidentes regulares o normales, y
- las ocasionadas por el grado de confiabilidad de la empresa.

Sng, **Au** y **Pang** (2019) apuntan a los *influencers* como origen potencial de un tipo de crisis desarrollado en los nuevos medios sociales.

Cuando estalla una situación adversa en una organización, o antes incluso para anticiparse, el planteamiento de soluciones por parte de los profesionales pasa por la creación e implementación de diversas estrategias. Según **Mintzberg** *et al.* (1999) (citado en **Madroñero** y **Capriotti**, 2018, p. 174), la definición de una estrategia con perspectiva es

> "analizar los recursos y capacidades de la organización, evaluar las fortalezas y ventajas competitivas internas de una organización, para seleccionar e impulsar aquellas que permitan a la organización alcanzar sus objetivos".

Los investigadores de la gestión de comunicación de crisis han recogido durante las últimas décadas gran número de estrategias, aunque cabría destacar las más empleadas. La clasificación de estrategias más recurrente hace mención a estas teorías de comunicación:

- la Teoría de Reparación de Imágenes, de Benoit;
- la Teoría de la Atribución, de Weiner, junto a la Teoría Situacional de Comunicación de Crisis (*Situational Crisis Communication Theory*, *SCCT*), de **Coombs** y **Holladay**, y la
- Teoría del Encuadre o Framing, de McCombs y Shaw.

Algunos autores que estudian la Teoría de la Reparación de Imágenes defienden una clasificación de estrategias en función de la motivación de su origen: una estrategia planificada con anticipación frente a una estrategia emergente, que surge en el momento de las interacciones con la crisis (**Mintzberg**, 2007, p. 4, en **David** y **Carignan**, 2017, p. 373). **Low**, **Varughese** y **Pang** (2011) acuden a la Teoría de Reparación de Imágenes para diferenciar entre las estrategias de mortificación y de acciones correctivas de los profesionales en Oriente y las estrategias de anulabilidad y refuerzo empleadas en Occidente. Sobre esto también **Holtzhausen** y **Roberts** (2009, p. 173) proponen las siguientes estrategias:

- negación,
- evasión,
- reducción de ofensiva,
- acción correctiva, y
- mortificación.

Por su parte, **Sng**, **Au** y **Pang** (2019) recogen la utilización constante de estrategias de distanciamiento en varias empresas anglosajonas, las cuales alternan estas respuestas con la adopción de la reparación de imágenes.

El objetivo final en estos casos es el conjunto de s*takeholders* o grupos de interés de la organización. **Grappi** y **Romani** (2015) ponen especial énfasis en la importancia de las reacciones del cliente o consumidor ante una crisis comunicativa, empleando en ello la Teoría de los Grupos de Interés. Esta teoría ofrece un papel importante a estos individuos o grupos del entorno organizacional –como los clientes, socios, etc.–, tanto en la comunicación general, como en la comunicación de crisis. Se asocia al filósofo y profesor americano R. E. Freeman, quien definió por primera vez en 1984 este término:

> "La Teoría de los Grupos de Interés consiste en un gran cuerpo de conocimiento que se enfoca en tener en cuenta simultáneamente los intereses de múltiples partes interesadas" (**De-Gooyert** *et al.*, 2017, p. 402).

Así, las teorías se han convertido en piezas clave para comprender y desarrollar los estudios sobre crisis. La mayoría de los investigadores recurren a las teorías clásicas ligadas a la comunicación. **Johnson-Avery** *et al.* (2010) apreciaron esta tendencia en su estudio bibliométrico, mencionando como ejemplos a **Dardis** y **Haigh** (2008) o **Holtzhausen** y **Roberts** (2009) –Teoría de la Reparación de la Imagen de Benoit– y a **Fussell-Sisco** (2012) o **Kim** y **Liu** (2012) –Teoría Situacional de Comunicación de Crisis de **Coombs** y **Holladay**–.

Sin embargo, y a pesar de la evidencia académica del dominio de dichas dos teorías en el campo, con la consolidación de internet y de las redes sociales y el mayor acercamiento de las empresas con sus públicos de interés, otras teorías parecen hacerse frecuentes: Los investigadores **Ha** y **Boynton** (2014, p. 37) recogieron en su estudio bibliométrico las más empleadas entre 1991 y 2011 en los textos científicos de comunicación de crisis y otras disciplinas relacionadas. Algunas de estas teorías nombradas coinciden en ser las más empleadas también en ese momento: Teoría de Restauración de Imágenes, de Encuadre, Teoría Situacional de Comunicación de Crisis o la Teoría de la Atribución.

Otras claves de la investigación en comunicación de crisis que **Castillo-Esparcia** y **Carretón-Ballester** (2010) estudiaron empíricamente como variables son los métodos y las técnicas empleados. Es importante el número de autores que subraya en sus textos un predominio de los métodos y técnicas cuantitativos, como la encuesta, el análisis de contenido o el experimento (**Kim**; **Johnson Avery**; **Lariscy**, 2011; **Molleda**, 2011; **Mikušová**; **Čopíková**, 2016; **Castillo-Esparcia**; **Castillero-Ostio**, 2019).

> "En los números analizados de 2016, la metodología utilizada es la encuesta o el cuestionario con un 24,7% y presente en el 80% de las revistas. Este método ha sido empleado tanto personalmente como por correo ordinario o a través del correo electrónico, siendo la vía online la más utilizada. Le sigue muy de cerca, con un 23,6%, la investigación experimental acompañada del cumplimiento de un cuestionario, empleada en el 90% de las revistas. En tercer lugar encontramos el análisis de contenido, representado con un 19,3% y presente también en 9 de las 10 revistas. La observación participante junto al meta análisis, al *focus group* y el panel de medición de audiencia son los métodos de investigación menos recurrentes" (**Castillo-Esparcia**; **Carretón-Ballester**, 2010, p. 210).

Los métodos cualitativos como la entrevista en profundidad son utilizados en menor medida y su uso se adscribe a un grupo más reducido de estudiosos, entre los que se encuentran **Jenkins** y **Goodman** (2015) o **Falkheimer** (2014).

Si seguimos con las variables recogidas por **Castillo-Esparcia** y **Carretón-Ballester** en su estudio de 2010 observaremos que la esfera geográfica ocupa un lugar relevante: los autores de las investigaciones de comunicación de crisis actuales parecen tener a priori el perfil occidental, frente al asiático-oriental (**Castillo-Esparcia**; **Carretón-Ballester**, 2010; **Goby**; **Nickerson**, 2015). A esta variable le hemos añadido en el presente estudio el término cultural, relacionándolo con el geográfico debido su papel de peso en la elaboración de los textos y en el trabajo de los profesionales. En el área geo-cultural **Low**, **Varughese** y **Pang** (2011) analizan a través de la Teoría de las Dimensiones Culturales cómo afecta la cultura a la reparación de imágenes de una institución tanto en Asia (Taiwán) como en occidente (Estados Unidos). Los autores llegaron a la conclusión de que los profesionales de las organizaciones de ambas culturas utilizan diferentes estrategias de respuesta comunicativa: en oriente se utilizan preferentemente las estrategias de mortificación y de acciones correctivas, mientras que en occidente se emplean las estrategias de anulabilidad y refuerzo.

Y dentro de Europa, y como ya se ha planteado en el apartado anterior, **Louma-aho**, **Moreno** y **Verhoeven** (2017) concluyen también que el contexto cultural juega un papel importante para la comunicación de crisis, debido a la presencia de diferentes tipos de crisis y, por ende, de diversas estrategias de respuesta. Los autores encontraron que los profesionales finlandeses emplean mayoritariamente las estrategias de información y disculpa, mientras que los españoles utilizan más la defensa y otras no acomodativas.

Por último, la observación de los principales datos, avances y resultados obtenidos por los investigadores de las últimas décadas ha generado en ellos una creciente preocupación por cuestiones transversales como la interdisciplinariedad en el campo de estudio, los hallazgos de investigación o las aplicaciones prácticas (**Igartua**; **Humanes**, 2004; **Ha**; **Boynton**, 2014). Identifican la interdisciplinariedad como el uso de varias disciplinas en un mismo estudio, mientras que relacionan los hallazgos con los resultados novedosos y las aplicaciones prácticas con el ejercicio de los descubrimientos. El estado interdisciplinario de la investigación empírica internacional ha sido puesto a prueba en congresos y ponencias por estudiosos en la materia, como **Heath** *et al.* (2019). Concluyeron que las interacciones interdisciplinarias, o la fertilización cruzada de métodos, teorías y modos de práctica entre disciplinas, no sólo estaba presente en el ámbito de las relaciones públicas, sino que también podrían generar soluciones productivas para abordar problemas complejos ocasionados por las crisis.

3. Preguntas de investigación

Tras la lectura de la bibliografía especificada y las conclusiones aportadas por sus autores, se plantean cinco preguntas de investigación con el propósito de resolver los objetivos antes descritos:

PI 1. ¿Qué temas de investigación sobresalen en los estudios empíricos sobre gestión de crisis entre 2008 y 2018?
PI 2. ¿Qué teorías tienen mayor presencia en los textos de gestión de crisis?
PI 3. ¿Qué métodos de investigación emplean más los autores?
PI 4. ¿Cuáles son los resultados y avances principales a los que llegan los estudiosos?
PI 5. ¿Qué ámbitos geo-culturales están mayormente representados a través de los autores y sus instituciones de procedencia?

Se tratará de dar respuesta a estas preguntas en los apartados de resultados y conclusiones.

4. Metodología

El presente texto se encuadra dentro de una investigación más genérica presentada y defendida como trabajo de fin de máster (**Zurro-Antón**, 2019). Tras su finalización, se consideró la necesidad de especificar y concretar los datos obtenidos, así como las referencias de contextualización e interpretación de los mismos. Fruto de la idea anterior nació este artículo, sustentado en la metodología seguida en el primer trabajo, que se detalla a continuación.

En un primer paso se realizaron búsquedas exhaustivas de bibliografía científica internacional con las palabras clave “crisis communication” o “comunicación de crisis” y “crisis management” o “gestión de crisis”, empleando los términos en inglés por su preponderancia en el campo, lo que ha permitido la obtención de una mayor cantidad de resultados. El periodo de publicación estudiado se limitó a la última década (2008- 2018) y dichas investigaciones, de carácter empírico, se buscaron en las seis principales bases de datos internacionales: *ProQuest Research Library*, *ABI/Inform Collection*, *EBSCOhost Academic Search Complete*, *EBSCOhost Business Source Complete*, *EBSCOhost Communication & Mass Media Complete* y *Elsevier ScienceDirect Journals Complete*. Como resultado, se obtuvo un vasto número de artículos y revistas. Para acotar la cantidad obtenida y generar unos resultados más precisos, se consultaron los índices de impacto *Journal Citation Reports* (*JCR*) y *Scopus-CiteScore*, eligiendo como muestra las seis primeras revistas incluidas tanto en las principales bases de datos indicadas como en alguno de estos dos índices, todas ellas de relaciones públicas o de gestión de la comunicación –la única excepción a este último criterio de selección se produjo con el *Journal of contingencies and crisis management*, que no está especializada en comunicación, pero que sí incluye artículos sobre comunicación de crisis–. Todas las revistas consideradas realizan revisión por pares (per-review): *Public relations review*, *Journal of contingencies and crisis management*, *Corporate communications*, *Journal of public relations research*, *Journal of communication management* e *International journal of strategic communication*.

En una segunda etapa se realizó una revisión para extraer los principales elementos de las publicaciones analizadas: temática general, teoría empleada, método de investigación utilizado, resultados y avances importantes generados y perfil profesional y geo-cultural del autor o autores firmantes.

El trabajo que aquí se presenta emplea el método cuantitativo del análisis de contenido. Tras hallar 1.710 artículos, se ha acotado la muestra a 143 artículos considerados válidos, buscando en su contenido el cumplimiento de requisitos o criterios de filtración, como el hecho de que se tratara de investigaciones empíricas o que su objetivo fuera la gestión de comunicación estudiada desde el ángulo de la comunicación y no desde el de la gestión empresarial.

Se ha considerado necesaria la presentación de doce variables y sus categorías de codificación analizadas empíricamente en cada texto, recogidas previamente por los autores **Castillo-Esparcia** y **Carretón-Ballester** (2010) y **Ha** y **Boynton** (2014), que coinciden con los cinco objetivos secundarios de este estudio: tema del artículo; aplicación teórica; método de investigación; técnica empleada; disciplinas; hallazgos; aplicaciones prácticas; número de autores por artículo; género de los autores; universidad o institución; país o procedencia geográfica y edad de los autores. Estas variables responden a indicadores: temática, teoría, metodología, avances e indicadores profesionales y geo-culturales.

Tabla 1. Relación de cada variable con sus categorías de codificación

Variable	Categorías de codificación
Tema del artículo	Nuevos medios online Estrategias de comunicación Tipos de crisis *Stakeholders* o grupos de interés Estudios de desarrollo profesional y académico Gestión de crisis Historiales de crisis y pre-crisis Comunicación interna de crisis Otros
Aplicación teórica	1. Teoría Situacional de Comunicación de Crisis (*SCCT*) 2. Teoría de Reparación de Imágenes 3. Teoría de la Atribución 4. Teoría de la Contingencia 5. Teoría de los *Stakeholders* o Grupos de Interés 6. Teoría de Agenda Setting y Teoría del Framing 7. Teoría de las Dimensiones Culturales 8. Uso de varias teorías 9. Otras
Método de investigación	1. Método cuantitativo 2. Método cualitativo 3. Triangulación metodológica
Técnica empleada	1. Encuesta 2. Diseño experimental / experimento 3. Análisis de contenido 4. Estudio de caso cualitativo 5. Análisis del discurso 6. Entrevista / Entrevista en profundidad 7. Focus group o grupo de discusión 8. Uso de varias técnicas cuantitativas 9. Uso de varias técnicas cualitativas 10. Uso de triangulación metodológica
Disciplinas	1. Comunicación 2. Comunicación y Sociología 3. Comunicación y Psicología 4. Comunicación y Geografía cultural 5. Comunicación y Demografía 6. Comunicación y Salud 7. Comunicación y Administración 8. Comunicación y Ciencias políticas 9. Comunicación de tres o más disciplinas
Hallazgos	1. Aportaciones y descubrimientos novedosos a la comunicación de crisis 2. Refutación y modificación de ideas y teorías anteriores
Aplicaciones prácticas	1. Aporte de métodos y modelos 2. Consejos
Número de autores por artículo	1. Uno 2. Dos 3. Tres 4. Cuatro 5. Cinco 6. Más de cinco

Variable	Categorías de codificación
Género de autores	1. Femenino 2. Masculino 3. Mixto. Femenino y masculino
Universidad o institución	1. *University of Tennessee* (Estados Unidos) 2. *University of Georgia* (Estados Unidos) 3. *University of Kentucky* (Estados Unidos) 4. *University of Florida* (Estados Unidos) 5. *University of Maryland* (Estados Unidos) 6. *Aarhus Universitet* (Dinamarca) 7. *Nanyang University* (Singapur) 8. *Lunds Universitet* (Suecia) 9. *Universidad Rey Juan Carlos* (España) 10. Varias universidades destacadas 11. Otros
País o precedencia geográfica	1. Estados Unidos 2. Singapur 3. Dinamarca 4. Suecia 5. Países Bajos 6. Corea del Sur 7. España 8. China 9. Varios países destacados 10. Otros
Edad de los autores	1. Joven 20-30 2. Mediana edad 31-55 3. Senior 56-80 4. Varias

Fuente: elaborado a partir de **Castillo-Esparcia** y **Carretón-Ballester** (2010) y de **Ha y Boynton** (2014)

Tras el análisis y codificación del contenido de los artículos, se procedió al tratamiento mediante *SPSS*. Las operaciones realizadas son: análisis descriptivo univariable, análisis bivariado de correlación de Pearson, Chi cuadrado y prueba t de Student.

5. Resultados

5.1. Temas principales de los artículos

La categoría temática “*stakeholders* o grupos de interés y percepción externa” ha resultado la más investigada por los autores de la última década, representando un 25% sobre los 143 artículos (n=36). Le siguen la categoría “estrategias de comunicación de crisis y sus efectos”, con un 22% (n=32); “nuevos medios online *vs* medios tradicionales”, con un 18% (n=25); “estudios y modelos de desarrollo profesional y académico de comunicación de crisis”, con un 16% (n=23); “comunicación de crisis en función de países, culturas y etnias” con un 10 % (n=14) y el resto solo llegan juntas al 9% (gráfico 1 y tabla 2).

El cruce categórico de Chi cuadrado no puede afirmar que la teoría o aplicación teórica empleada guarde una relación general significativa con el tema estudiado en el artículo [χ^2 (64, N=143)= 83.04, p>0.05]. Sin embargo, existe una relación estadísticamente significativa entre el tema principal del artículo y la técnica empleada para su estudio [χ^2 (64, N=143)= 103.04, p<0.01].

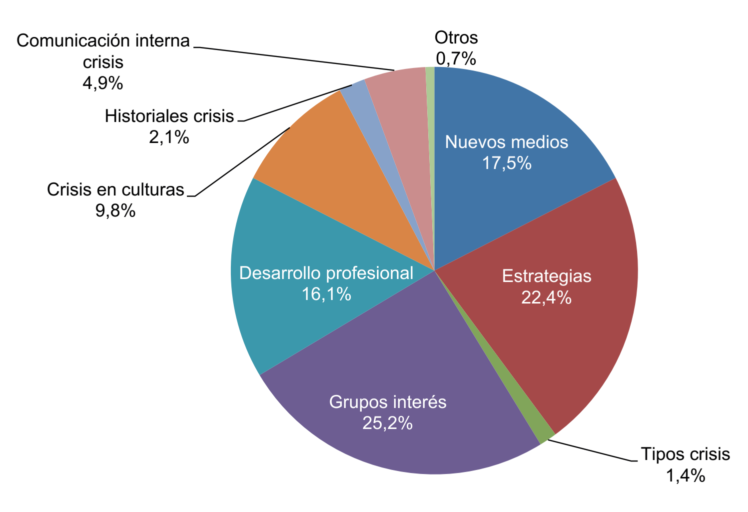


Gráfico 1. Temas de artículos científicos de comunicación de crisis (porcentajes sobre el total)

Tabla 2. Temas de artículos científicos de comunicación de crisis

	n	%
Nuevos medios vs medios tradicionales	25	17,5
Estrategias de comunicación de crisis	32	22,4
Tipos de crisis	2	1,4
Stakeholders o grupos de interés	36	25,2
Desarrollo profesional y académico	23	16,1
Gestión de crisis en culturas	14	9,8
Historiales de crisis	3	2,1
Comunicación interna de crisis	7	4,9
Otros	1	0,7
Total	143	100

En concreto, la temática de "nuevos medios online" (|-2.0|<-1.96) tiene menor probabilidad de ser estudiada mediante encuestas que el tema "tipos de crisis" (|3.9|>2.58). El tema más frecuente en la investigación de los últimos diez años, "*stakeholders* o grupos de interés" tiene una mayor probabilidad de ser estudiado mediante el experimento cuantitativo (|3.7|>2.58) que el de "estudios y modelos de desarrollo profesional y académico" (|-2.3|<-1.96).

La interdisciplinariedad y el tema observado por los autores también presentan una significatividad [χ^2 (48, N=143)= 131.88, p= 0.000]. La ausencia de interdisciplinariedad (o lo que es lo mismo, el empleo único de la comunicación como disciplina estudiada) está presente en mayor medida en los textos sobre "estudios y modelos de desarrollo profesional y académico" (|4.00|>2.58) y en los que versan sobre "estrategias de comunicación de crisis" (|2.7|>2.58), frente a los que tratan sobre los "*stakeholders* o grupos de interés" (|-3.3|<-2.58), en los que hay menor probabilidad de emplear un enfoque unidisciplinar y, por ende, mayor probabilidad de contemplar multidisciplinariedad.

En cuanto al país de origen, la prueba sí confirma relaciones significativas con las temáticas observadas [χ^2 (72, N=143)= 96.19, p<0.05]. Estados Unidos es el país con mayor probabilidad de publicar en solitario investigaciones sobre "estrategias de comunicación de crisis" (|2.0|>1.96), mientras que sus universidades publican menos textos sobre "comunicación interna de crisis" (|- 2.3|<-1.96). Singapur es el único país cuyos investigadores publican más textos acerca de "nuevos medios vs medios tradicionales" (|2.1|>1.96). España (|2.2|>1.96) y China (|2.3|>1.96) publican en mayor probabilidad en solitario artículos sobre "nuevos medios". Cuando los autores de varios de estos países destacados trabajan en colaboración, disminuye la probabilidad estadística de divulgar investigaciones sobre "nuevos medios" (|-2.0|<-1.96) y aumenta la probabilidad de publicar textos sobre "comunicación de crisis en función de países" (|2.6|>2.58). Finalmente, se han estudiado las relaciones entre el género de los autores y la elección de la temática investigada y entre su edad y el tema. El test revela que no se puede corroborar la existencia de relaciones estadísticamente significativas entre todas esas variables.

5.2. Teorías y aplicación teórica de los textos analizados

La Teoría Situacional de Comunicación de Crisis se ha empleado en el marco teórico en un (23,8%, n=34) del total de los textos (N=143) según ha mostrado el *SPSS*, siendo esta la teoría más empleada en solitario en la última década, la segunda si se contempla el empleo conjunto de varias teorías en una misma investigación (44,1%, n=63). En tercer lugar y con un descenso del porcentaje de uso se situaría el grupo de "otras teorías" no destacadas (10,5%, n=15), como la Teoría de la Esfera Web o la Teoría del Cambio de Conflictos Transnacionales, entre otras. En cuarto lugar aparecería la Teoría de Reparación de Imágenes con un (7,7%, n=11), seguida de la Teoría de la Contingencia (4,9%, n=7) y de las Teorías de la Establecimiento de Agenda y Encuadre (4,2%, n=6). El resto de aplicaciones destacadas – Teoría de la Atribución (2,8%, n=4), Teoría de los Grupos de Interés (1,4%, n=2) y Teoría de las Dimensiones Culturales (0,7%, n=1)–, suponen en su conjunto tan solo el (4,9 %) del total.

En el cruce entre el método empleado y la teoría escogida, existen relaciones estadísticamente significativas [χ^2 (16, N=143)= 47.06, p=0.000]. El método cuantitativo es empleado con mayor probabilidad estadística con la Teoría Situacional de Comunicación de Crisis (|3.9|>2.58), aunque es utilizado con menor probabilidad en el conjunto de varias teorías destacadas (|-2.5|<-1.96). La triangulación metodológica es estadísticamente más empleada bajo la Teoría de Reparación de Imágenes (|3.3|>2.58) y la Teoría de la Atribución (|3.7|>2.58). El Chi cuadrado también refleja relaciones de significancia entre la técnica empleada y la teoría escogida [χ^2 (64, N=143)= 105.30, p<0.01]. La encuesta es probablemente más empleada con el uso de la Teoría de las Dimensiones Culturales (|2.7|>2.58); el experimento es más utilizado estadísticamente hablando con el empleo de la *SCCT* (|4.0|>2.58), mientras que el uso conjunto de varias teorías es menor en el caso de la *SCCT* (|-2.5|<- 1.96); el uso del análisis del discurso cualitativo es mayor en textos con las Teorías de Establecimiento de la Agenda y Encuadre (|2.6|>2.58); estadísticamente se emplea más la combinación de varias técnicas cuantitativas con la presencia en solitario de la Teoría Situacional de Comunicación de Crisis (*SCCT*) (|3.0|>2.58).

5.3. Métodos y técnicas empleados en la última década de investigación

En el caso del método, se pudieron establecer tres categorías: método cuantitativo (55,9%, n=80), método cualitativo (30,8%, n=44) y la triangulación metodológica (13,3%, n=19) –empleo de ambos métodos–.

Por su parte, las técnicas presentes se agrupan en diez categorías: encuesta (11,9%, n=17), diseño experimental / experimento (22,4%, n=32), análisis de contenido (18,2%, n=26), estudio de caso cualitativo (4,2%, n=6), análisis del discurso (7%, n=10), entrevista / entrevista en profundidad (8,4%, n=12), *focus group* o grupo de discusión (0%, n=0), uso de varias técnicas cuantitativas (3,5%, n=5), uso de varias técnicas cualitativas (11,2%, n=6), uso de triangulación metodológica (13,3%, n=19). Los resultados del *SPSS* anuncian un mayor recurso del método cuantitativo y la técnica cuantitativa del experimento en las investigaciones. El método menos empleado ha sido la triangulación metodológica y el uso de varias técnicas cuantitativas, omitiendo la inexistencia de textos con grupos de discusión.

Las disciplinas observadas se relacionan significativamente con los métodos empleados [χ^2 (12, N=143)= 23.56, p<0.05]. Existe una mayor probabilidad estadística de que los estudios encuadrados únicamente en la Comunicación empleen método cualitativo (|2.3|>1.96) y una menor probabilidad de que recurran al método cuantitativo (|-2.0|<-1.96). Aquellas investigaciones que combinan tres o más disciplinas- interdisciplinariedad- emplean con mayor probabilidad el método cuantitativo (|2.6|>2.58) y con menor probabilidad el cualitativo (|-2.3|<-1.96).

Observando el comportamiento de los indicadores de perfil geo-cultural y profesional, se resuelve que el Chi cuadrado asume relaciones estadísticas entre el número de autores y la elección del método [χ^2 (10, N=143)= 30.39, p<0.01]. Cuando solo un autor firma el texto, existe menor probabilidad de que este utilice el método cuantitativo (|-2.0|<-1.96). En cambio, existe mayor probabilidad del uso de este método cuando dos investigadores trabajan juntos (|2.3|>1.96). Cuando escriben cinco autores, se reduce la probabilidad de emplear un método cuantitativo (|- 2.0|<-1.96) y se amplía la de utilizar la triangulación metodológica (|4.5|>2.58). Existen correspondencias estadísticas entre el número de autores y la elección de la técnica [χ^2 (40, N=143)= 61.85, p<0.05]. Cuando los autores son tres, es más probable que empleen como técnicas el análisis del discurso (|3.2|>2.58) y la encuesta (|2.0|>1.96), mientras que es menos probable que empleen la entrevista en profundidad (|-2.2|<-1.96) y el experimento (|-2.0|<-1.96). Al igual que sucedía con el método, en los artículos con cinco autores es más probable el uso de una triangulación metodológica (|4.5|>2.58).

Finalmente, el Chi cuadrado confirma una gran relación estadística [χ^2 (18, N=143)= 68.22, p=0.000] entre el país de origen de los investigadores y la elección del método aplicado. Estados Unidos es un país con una alta probabilidad de emplear el método cuantitativo (|4.1|>2.58) pero con una menor probabilidad de divulgar textos con un método cualitativo (|- 3.7|<-2.58). Por el contrario, Singapur ofrece una mayor probabilidad de publicar artículos con un método cualitativo (|2.9|>2.58) y una menor posibilidad de publicarlos bajo el cuantitativo (|-2.8|<-2.58). Los investigaciones de China poseen una mayor probabilidad de emplear la triangulación metodológica (|4.5|>2.58) y una menor probabilidad de utilizar el método cuantitativo de forma aislada (|2.0|>1.96).

5.4. Avances de los documentos

Dentro de los "avances" se han encuadrado, siguiendo a los autores, la "disciplina", los "hallazgos" y las "aplicaciones prácticas". La variable "disciplina" se compone de nueve categorías: Comunicación-de manera aislada- (18,2%, n=26); Comunicación y Sociología (5,2%, n=8); Comunicación y Psicología (11,2%, n=16); Comunicación y Geografía cultural (5,6%, n=8); Comunicación y Demografía (0%, n=0); Comunicación y Salud (0,7%, n=1); Comunicación y Administración (3,5%, n=5); Comunicación y Ciencias políticas (0%, n=0) y Combinación de tres o más disciplinas –interdisciplinariedad– (55,2%, n=79). La variable "hallazgos" consta de dos categorías fundamentales: descubrimientos novedosos (67,8%, n=97) y modificaciones de ideas (32,2%, n=46) y la variable "aplicaciones prácticas" consta de otras dos: aporte de modelos (23,8%, n=34) y aporte de consejos (76,3%, n=109).

La prueba r de Pearson halla esa relación estadísticamente significativa (p=0.03<0.05) entre hallazgos y aplicaciones prácticas. La relación es positiva débil (r=0.18). La t de Student halla diferencias significativas [t (26.59)=2.79, p<0.05] entre la media de número de autores en los descubrimientos novedosos (M=2.26, SD=0,98) y su media en la modificación de ideas (M=1.82, SD=0.41).

La procedencia geográfica también ha sido cruzada con las variables de avance. La prueba Chi cuadrado no confirma relaciones significativas entre el país de procedencia y las disciplinas [χ^2 (54, N=143)= 67.93, p>0.05]. En los hallazgos, la t de Student tampoco permite hablar de diferencias estadísticas [t (12.23)=-0.35, p=0.73>0.05] entre la media de los países de procedencia de las aportaciones novedosas (M=4.47, SD=3.76) y su media en la modificación de ideas (M=4.91, SD=3.89). El mismo test impide la confirmación de diferencias estadísticas [t (91)=0.76, p>0.05] entre la media de procedencia geográfica en el aporte de modelos (M=4.91, SD=3.87) y su media en el aporte de consejos (M=4.29, SD=3.75). Las universidades, como el país de procedencia, tampoco se relacionan significativamente con las disciplinas, hallazgos y aplicaciones prácticas.

5.5. Perfiles geo-culturales y profesionales de los investigadores

El número de autores por artículo presenta seis categorías: uno (23,8%, n=34), dos (42,7%, n=61), tres (26,6%, n=38), cuatro (4,2%, n=6), cinco (2,1%, n=3) y más de cinco investigadores (0,7%, n=1). El género posee dos principales: femenino (42,7%, n=61) y masculino (15,4%, n=22), considerándose el resto mixto (42%, n=60). La edad incluye dos categorías destacadas: joven (11,2%, n=16) y mediana edad (50,3%, n=72), siendo el resto senior (2,1%, n=3) y conjunta (36,4%, n=52). El país alberga diez categorías: Estados Unidos (41,3%, n=59), Singapur (4,2%, n=6), Dinamarca (3,5%, n=5), Suecia (8,4%, n=12), Países Bajos (4,2%, n=6), Corea del Sur (1,4%, n=2), España (0,7%, n=1), China (2,1%, n=3), trabajo conjunto de varios países destacados (17,5%, n=25) y otros países no destacados (16,8%, n=24). Por último, la variable universidad, que tiene diez categorías: *University of Tennessee*, EUA (1,4, n=2), *of Georgia*, EUA (0%, n=0), *of Kentucky*, EUA (0%, n=0), *of Florida*, EUA (3,5%, n=5), *of Maryland*, EUA (2,1%, n=3), *Aarhus Universitet*, Dinamarca-(2,8%, n=4), *Nanyang University*, Singapur (2,1%, n=3), *Lunds Universitet*, Suecia (3,5%, n=5), *Universidad Rey Juan Carlos*, España (0%, n=0), trabajo conjunto de varias universidades destacadas (22,45, n=32) y otras universidades e instituciones no destacados (62,2%, n=89).

El número de autores que firman más frecuentemente los textos es dos. El género que más divulga es el femenino, aunque existe un alto porcentaje de colaboración entre ambos sexos. Los autores que más publican son los de mediana edad, aunque también hay un gran porcentaje de colaboraciones entre diversas edades. La mayoría de textos proceden de Estados Unidos, seguidos del trabajo conjunto entre varios países destacados. Las universidades no destacadas han publicado más textos, pero el porcentaje del trabajo conjunto entre universidades es alto.

Al establecer cruces entre estas cinco variables se obtiene lo siguiente. El género posee gran relación significativa con el número de autores [χ^2 (10, N=143)= 47.15, p=0.000]. En textos con tres autores existe mayor probabilidad de que haya colaboración mixta (|3.1|>2.58) y menor probabilidad de que estos sean solo mujeres (|-2.0|<-1.96). Cuando hay cuatro (|2.1|>1.96) y cinco autores (|2.1|>1.96) en un solo texto, estos forman colaboraciones mixtas en su mayor parte. Tanto el test t de Student como el Chi cuadrado no reconocen la existencia de diferencias o relaciones significativas entre la edad, el país y la universidad con el número de autores; ni tampoco entre la universidad y el país con el género o entre el país y la universidad con la edad.

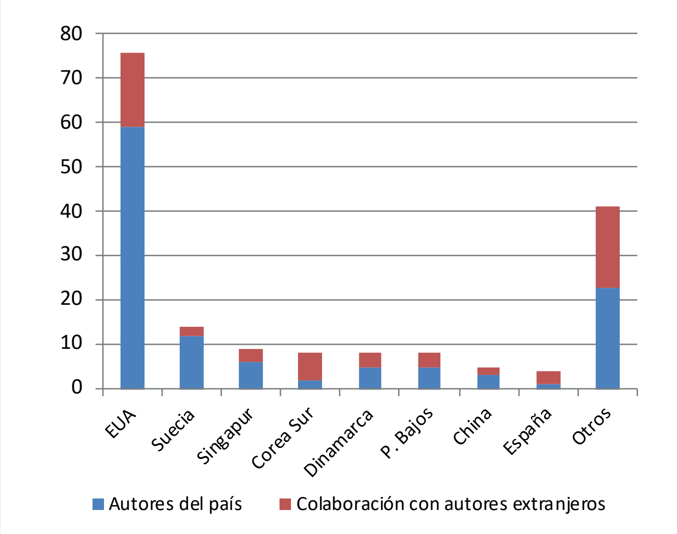


Gráfico 2. Artículos nacionales e internacionales procedentes de cada país

6. Discusión y conclusiones

Las claves de investigación en comunicación de crisis de la última década contribuyen a la merma de los efectos negativos que estas situaciones generan sobre la confianza en los grupos de interés. Cuantas más áreas relativas a las crisis conozcan los investigadores, más cerca estarán estos y los profesionales de las relaciones públicas de aplicar medidas para acrecentar esa confianza.

En concreto, los resultados de esta investigación confirman como temas más estudiados los "grupos de interés" (25%); las "estrategias" (22%) y "los nuevos medios online" (18%). En base a estos datos, quedaría resuelta la primera pregunta de investigación planteada. Otras investigaciones similares anteriores ya habían anticipado el recurso frecuente a estas temáticas (**Grappi**; **Romani**, 2015; **Sng**; **Au**; **Pang**, 2019; **Castillo-Esparcia**; **Castillero-Ostio**, 2019, pp. 207-208), aunque este estudio lo actualiza al ámbito internacional de la última década. Para profundizar en este punto se ha realizado un cruce entre la temática y los métodos y técnicas de investigación, y hallamos que el tema de los grupos de interés, presenta una mayor probabilidad de ser estudiado mediante el método cuantitativo y la técnica del experimento, frente al de "desarrollo profesional y académico", que utiliza significativamente menos este método y técnica. Los textos sobre nuevos medios emplean con menor probabilidad la encuesta, y el estudio de caso y entrevista en profundidad son más estudiados en los documentos sobre desarrollo profesional y comunicación interna de crisis, respectivamente. Al comparar la temática con otras variables, obtenemos que las investigaciones sobre desarrollo profesional y sobre estrategias son las que menos emplean estadísticamente la interdisciplinariedad, frente a los textos sobre el tema principal de los grupos de interés, que se enfocan más probablemente en tres o más disciplinas. La procedencia geográfica se conecta con el tema, pues Estados Unidos publica más probablemente estudios sobre "estrategias" y Singapur, Países Bajos, España y China sobre "nuevos medios".

Mapa 1. Distribución geográfica de trabajos aislados y colaborativos entre universidades

Respecto a las teorías, segunda pregunta de investigación del estudio, los hallazgos contemplan que la *SCCT* se ha empleado en un (23,8%) de los textos, siendo esta la teoría más empleada en solitario, la segunda si se contempla el empleo conjunto de varias teorías (44,1%). Estos datos contrastan con los recogidos en estudios anteriores, en donde los autores subrayaban la presencia de la Teoría de Reparación de Imágenes tanto en sus propios textos como fuera de ellos (**Low**; **Varughese**; **Pang**, 2011; **Sng**; **Au**; **Pang**, 2019). Al cruzar las variables, se obtiene la existencia de conexiones estadísticas entre el método y la teoría. El método cuantitativo es empleado con mayor probabilidad en los textos sobre la Teoría Situacional de Comunicación de Crisis (*SCCT*). Por el contrario, existe una menor probabilidad de empleo del método cualitativo sobre la *SCCT* y hay una mayor probabilidad de uso del cualitativo con el empleo de varias teorías. La triangulación metodológica es estadísticamente más empleada en las investigaciones bajo la Teoría de Reparación de Imágenes y la Teoría de la Atribución. De las técnicas, la encuesta es probablemente más empleada con la Teoría de las Dimensiones Culturales; el experimento con la *SCCT*; el análisis de contenido y el análisis del discurso son más recurridos en las Teorías de Establecimiento de la Agenda y Encuadre y el estudio de caso es más probable en la Teoría de los Grupos de Interés. La triangulación es más empleada con la Teoría de Reparación de Imágenes o la Teoría de la Atribución.

Castillo-Esparcia y **Carretón-Ballester** (2010) adelantaron que los métodos y técnicas de investigación predilectos en los textos nacionales son los cuantitativos, datos que se corroboran años después también en el ámbito internacional a través del presente estudio. Los datos ofrecidos por el *SPSS* en esta investigación resaltan el uso del método cuantitativo aplicado (55,9 %) aunque, se viene variando el orden de la preferencia de las técnicas frente a las conclusiones de **Castillo-Esparcia** y **Carretón-Ballester** (2010): el experimento (22,4%), seguido del análisis de contenido (18,2%) y la triangulación metodológica (13,3%). Al relacionar estos resultados con el resto de variables, se aprecia que el enfoque en una única disciplina –la Comunicación– es más probable en los textos de método cualitativo y menos probable en los textos cuantitativos. La interdisciplinariedad –tres o más disciplinas– es más probable en textos cuantitativos que en textos cualitativos. En cuanto a perfiles, el número de autores incide en la elección de un método o una teoría. Cuando solo un autor firma existe menor probabilidad de uso del método cuantitativo, método más probable cuando trabajan tres autores. Cuando investigan juntos más de cinco autores, estos utilizan más significativamente la triangulación metodológica. En cuanto a procedencia geográfica, Estados Unidos publica mayormente estudios con las técnicas cuantitativas del experimento y el análisis de contenido; y en menor medida varias técnicas cualitativas; al contrario que Singapur, que emplea más el análisis del discurso. China emplea más la triangulación metodológica, pero menos el método cuantitativo.

Los resultados en la variable "avances" confirman que la interdisciplinariedad sí se ha hallado en mayor proporción en los textos de entre 2008 y 2018, algo que han destacado antes y después otros autores en sus textos (**Ha**; **Boynton**, 2014; **Heath** *et al.*, 2019). En la presente investigación la interdisciplinariedad ha alcanzado el 55,2% de los artículos, por delante de la Comunicación de manera aislada (18,2%) y la unión entre Comunicación y Psicología (11,2%). La mayoría de hallazgos han sido descubrimientos novedosos (67,8%) pero, las aplicaciones prácticas, aporte de consejos (76,3%). No existe relación del número de autores con la disciplina o con las aplicaciones prácticas, pero sí en los hallazgos.

Sobre los perfiles geo-culturales y profesionales, hemos obtenido datos para sostener que el número de autores que firman más significativamente los textos es dos (42,7%); el género que más divulga en solitario es el femenino (42,7%; 15,4% hombres) a pesar de que existe un alto porcentaje de colaboración entre ambos sexos (42%). **Castillo-Esparcia** y **Carretón-Ballester** (2010) concluyeron a grandes rasgos una equiparación de géneros en los textos nacionales, aunque las cifras de publicación en solitario son ligeramente diferentes (52,71% hombres; 41,7% mujeres). Ello evidencia que en España los hombres divulgan más en solitario, aunque en el plano internacional las que más lo hacen son ellas. Según resultados del presente estudio, los autores que más publican son de mediana edad (50,3%) aunque también existen colaboraciones entre varias edades (36,4%) y el país con mayor número de investigaciones es Estados Unidos (41,3%), seguido del trabajo conjunto de varios países destacados. Si bien las universidades no destacadas, como la de *Leicester* de Reino Unido o la de *Berlin* de Alemania, han publicado más textos (62,2%), el porcentaje de estudios de colaboración entre universidades destacadas es relevante (22,45%). Esto encaja con los resultados obtenidos por **Castillo-Esparcia** y **Castillero-Ostio** (2019), que entronan a Estados Unidos como el país del que proceden mayor número de autores (60,57% en 2016), seguido de Países Bajos (10,28%) y de Reino Unido (8,57).

Estos hallazgos presentados en el documento pretenden ser de utilidad tanto para la comunidad científica, en general, como para el trabajo futuro de los investigadores de la materia, en particular.

La presentación acotada de la información relativa a los principales temas, teorías, métodos, resultados y características geo-culturales de los investigadores actuales de gestión de crisis, podría servir de ayuda al resto de autores, ofreciendo una base teórico- metodológica a sus propios trabajos, así como ideas hacia los objetivos e hipótesis a trabajar. Una limitación de este trabajo a ser considerada por futuros estudios es la comparación de resultados en el tiempo, es decir, la generación de una investigación evolutiva que muestre a modo de "vídeo" y no solo de "fotografía" los aspectos estudiados y su estado en cada año del periodo analizado.

Con todo, la actual crisis producida por la pandemia de Covid-19 ofrece una oportunidad a las organizaciones y a sus profesionales para tomar fuerza y mejorar su imagen (**Almansa-Martínez**; **Fernández-Souto**, 2020) ante los grupos de interés y otros públicos. Los datos perfilados en este texto quizá orienten a los investigadores a la hora de estudiar la comunicación y relaciones públicas de las empresas durante esta particular etapa, ofreciéndole visión de los aspectos más relevantes a analizar.

7. Referencias

Almansa-Martínez, Ana (2009). "Relaciones públicas y medios de comunicación. Estudio del caso español". *Razón y palabra*, n. 70.
https://dialnet.unirioja.es/servlet/articulo?codigo=3103157

Almansa-Martínez, Ana; **Fernández-Souto, Ana-Belén** (2020). "Professional public relations (PR) trends and challenges". *El profesional de la información*, v. 29, n. 3. e290303.
https://doi.org/10.3145/epi.2020.may.03

Benoit, William L. (1997). "Image repair discourse and crisis communication". Public relations review, v. 23, n. 2, pp. 177-186.
https://doi.org/10.1016/S0363-8111(97)90023-0

Bergeron, Caroline D.; **Cooren, François** (2012). "The collective framing of crisis management: A ventriloqual analysis of emergency operations centres". *Journal of contingencies and crisis management*, v. 20, n. 3, pp. 120-137.
https://doi.org/10.1111/j.1468-5973.2012.00671.x

Capriotti, Paul; **Carretón-Ballester, Carmen**; **Castillo-Esparcia, Antonio** (2016). "Testing the level of interactivity of institutional websites: From museums 1.0 to museums 2.0", *International journal of information management*, v. 36, n. 1, pp. 97-104.
https://doi.org/10.1016/j.ijinfomgt.2015.10.003

Castillo-Esparcia, Antonio; **Carretón-Ballester, Carmen** (2010). "Investigación en comunicación. Estudio bibliométrico de las revistas de comunicación en España". *Comunicación y sociedad*, v. 23, n. 2, pp. 289-327.
http://hdl.handle.net/10171/27872

Castillo-Esparcia, Antonio; **Castillero-Ostio, Elizabet** (2019). "Investigación en comunicación. Metodologías, temáticas y fuentes / Communication research. Methodologies, themes and sources". *Revista internacional de relaciones públicas*, v. 9, n. 18, pp. 197-218.
http://revistarelacionespublicas.uma.es/index.php/revrrpp/article/view/622

Coombs, W. Timothy (2012). "Ongoing crisis communication. Planning, managing and responding" (3rd ed.). Los Ángeles, CA: Sage, 2. ISBN: 978 1 412949927

Coombs, W. Timothy; **Holladay, Sherry J.** (2012). "The paracrisis: The challenges created by publicity managing crisis prevention". *Public relations review*, v. 38, n. 3, pp. 408-415.
https://doi.org/10.1016/j.pubrev.2012.04.004

Dardis, Frank; **Haigh, Michel M.** (2008). "Prescribing versus describing: testing image restoration strategies in a crisis situation". *Corporate communications*, v. 14, n. 1, pp. 101-118.
https://doi.org/10.1108/13563280910931108

David, Marc D.; **Carignan, Marie-Eve** (2017). "Crisis communication adaptation strategies in the MM&A train explosion in Lac-Mégantic downtown: Going back to field communication". *Corporate communications*, v. 22, n. 3, pp. 369-382.
https://doi.org/10.1108/CCIJ-02-2016-0022

De-Gooyert, Vincent; **Rouwette, Etiënne**; **Van-Kranenburg, Hans**; **Freeman, Edward** (2017). "Reviewing the role of stakeholders in operational research: A stakeholder theory perspective". *European journal of operational research*, v. 262, n. 2, pp. 402-410.
https://doi.org/10.1016/j.ejor.2017.03.079

Eaddy, LaShonda-Louallen; **Jin, Yan** (2018). "Crisis history tellers matter: The effects of crisis history and crisis information source on publics' cognitive and affective responses to organizational crisis". *Corporate communications*, v. 23, n. 2, pp. 226-241.
https://doi.org/10.1108/CCIJ-04-2017-0039

Falkheimer, Jesper (2014). "Crisis communication and terrorism: the Norway attacks on 22 July 2011". *Corporate communications*, v. 19, n. 1, pp. 52-63.
https://doi.org/10.1108/CCIJ-08-2012-0053

Fussell-Sisco, Hilary (2012). "Nonprofit in crisis: An examination of the applicability of situational crisis communication theory". *Journal of public relations research*, v. 24, n. 1, pp. 1-17.
https://doi.org/10.1080/1062726X.2011.582207

Goby, Valerie-Priscilla; **Nickerson, Catherine** (2015). "The impact of culture on the construal of organizational crisis: perceptions of crisis in Dubai". *Corporate communications*, v. 20, n. 3, pp. 310-325.
https://doi.org/10.1108/CCIJ-06-2014-0036

Grappi, Silvia; **Romani, Simona** (2015). "Company post-crisis communication strategies and the psychological mechanism underlying consumer reactions". *Journal of public relations research*, v. 27, n. 1, pp. 22-45.
https://doi.org/10.1080/1062726X.2014.924839

Ha, Jin-Hong; **Boynton, Lois** (2014). "Has crisis communication been studied using an interdisciplinary approach? A 20-year content analysis of communication journals". *International journal of strategic communication*, v. 8, n. 1, pp. 29-44.
https://doi.org/10.1080/1553118X.2013.850694

Heath, Robert; **McKie, David**; **Munshi, Debashish**; **Xifra, Jordi** (2019). "Public relations critical intersections special section introduction". *Public relations review*, v. 45, n. 5, 101859.
https://doi.org/10.1016/j.pubrev.2019.101859

Holtzhausen, Derina R.; **Roberts, Glen F.** (2009). "An investigation into the role of image repair theory in strategic conflict management". *Journal of public relations research*, v. 21, n. 2, pp. 165-186.
https://doi.org/10.1080/10627260802557431

Igartua, Juan-José; **Humanes, María-Luisa** (2004). "Teoría e investigación en comunicación social". Madrid, España: Editorial Síntesis. ISBN: 978 84 97562263

Jenkins, Shannon; **Goodman, Michael** (2015). "He's one of ours: A case study of a campus response to crisis". *Journal of contingencies and crisis management*, v. 23, n. 4, pp. 201-209.
https://doi.org/10.1111/1468-5973.12086

Johnson-Avery, Elizabeth; **Weaver-Lariscy, Ruthann**; **Kim, Sora**; **Hocke, Tatjana** (2010). "A quantitative review of crisis communication research in public relations from 1991 to 2009". *Public relations review*, v. 36, n. 2, pp. 190-192.
https://doi.org/10.1016/j.pubrev.2010.01.001

Kim, Sora; **Johnson-Avery, Elizabeth**; **Lariscy, Ruthann-Weaver** (2011). "Reputation repair at the expense of providing instructing and adjusting information following crises". *International journal of strategic communication*, v. 5, n. 3, pp. 183-199.
https://doi.org/10.1080/1553118X.2011.566903

Kim, Sora; **Liu, Brooke-Fisher** (2012). "Are all crises opportunities? A comparison of how corporate and government organizations responded to the 2009 flu pandemic". *Journal of public relations research*, v. 24, n. 1, pp. 69-85.
https://doi.org/10.1080/1062726X.2012.626136

Kingma, Sigrid (2008). "The risk paradigm, organizations and crisis management". *Journal of contingencies and crisis management*, v. 16, n. 3, pp. 164-168.
https://doi.org/10.1111/j.1468- 5973.2008.00545.x

Louma-aho, Vilma; **Moreno, Ángeles**; **Verhoeven, Piet** (2017). "Crisis response strategies in Finland and Spain". *Journal of contingencies and crisis management*, v. 25, n. 4, pp. 223-231.
https://doi.org/10.1111/1468-5973.12163

Low, Yvonne-Siew-Yoong; **Varughese, Jeni**; **Pang, Augustine** (2011). "Communicating crisis: how culture influences image repair in Western and Asian governments". *Corporate communications*, v. 16, n. 3, pp. 218-242.
https://doi.org/10.1108/13563281111156880

Madroñero, Gabriela; **Capriotti, Paul** (2018). "La etapa de la estrategia de comunicación en el proceso de planificación de la comunicación y las relaciones públicas / The stage of communication strategy in the planning", *Revista internacional de relaciones públicas*, v. 8, n. 16, pp. 171-186.
http://revistarelacionespublicas.uma.es/index.php/revrrpp/article/view/542

Mikušová, Marie; **Čopíková, Andrea** (2016). "What business owners expect from a crisis manager? A competency model: Survey results from Czech businesses". *Journal of contingencies and crisis management*, v. 24, n. 3, pp. 162- 180.
https://doi.org/10.1111/1468-5973.12111

Mintzberg, Henry (2007). "Tracking strategies: Toward a general theory". ISBN: 978 0 199228508

Molleda, Juan-Carlos (2011). "Advancing the theory of cross-national conflict shifting: A case discussion and quantitative content analysis of a transnational crisis' newswire coverage". *International journal of strategic communication*, v. 5, n. 1, pp. 49-70.
https://doi.org/10.1080/1553118X.2011.537604

Nätti, Satu; **Rahkolin, Suvi**; **Saraniemi, Saila** (2014). "Crisis communication in key account relationships". *Corporate communications*, v. 19, n. 3, pp. 234-246.
https://doi.org/10.1108/CCIJ-08-2012-0056

Sng, Kylie; **Au, Tsi-Ying**; **Pang, Augustine** (2019). "Social media influencers as a crisis risk in strategic communication: Impact of indiscretions on professional endorsements". *International journal of strategic communication*, v. 13, n. 4, pp. 301-320.
https://doi.org/10.1080/1553118X.2019.1618305

Sundstrom, Craig (2019). "Five questions about media interview and crisis communication training (interview)". *Communication command*, summer.
https://us1.campaign-archive.com/?e=db98535e03&u=5f5f8c11d02883225c42c27c3&id=742cad2431

Taleb, Nassim-Nicholas (2013). *Antifragile. Prosperare nel disordine*. Il Saggiatore. ISBN: 978 88 42819172

Valentini, Chiara; **Kruckeberg, Dean** (2011). "Public relations and trust in contemporary global society: A Luhmannian perspective of the role of public relations". *Central European journal of communication*, v. 4, n. 1 (6), pp. 91-107.
http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-dd7146cd-6a11-46a7-9826-3570aa147f71

Verhoeven, Piet (2016). "The co-production of business news and its effects: The corporate framing mediated-moderation model". *Public relations review*, v. 42, n. 4, pp. 509-521.
https://doi.org/10.1016/j.pubrev.2016.03.006

Verhoeven, Piet; **Tench, Ralph**; **Zerfass, Ansgar**; **Moreno, Ángeles**; **Verčič, Dejan** (2014). "Crisis? What crisis?: How European professionals handle crises and crisis communication". *Public relations review*, v. 40, n. 1, pp. 107-109.
https://doi.org/10.1016/j.pubrev.2013.10.010

Xu, Jie; **Wu, Yiye** (2015). "Using Twitter in crisis management for organizations bearing different country-of-origin perceptions". *Journal of communication management*, v. 19, n. 3, pp. 239-253.
https://doi.org/10.1108/JCOM-06-2013-0050

Zerfass, Ansgar; **Verhoeven, Piet**; **Moreno, Ángeles**; **Tench, Ralph**; **Verčič, Dejan** (2013). "A changing landscape - managing crises, digital communication and CEO positioning in Europe. Results of a survey in 43 countries". *European communication monitor*, 128 pp.
http://www.communicationmonitor.eu/2013/06/13/ecm-european-communication-monitor-2013-ceo-communication-social-media-skills-digital-gatekeepers-international-crisis-communication-status

Zurro-Antón, Noelia (2019). *Comunicación de crisis (2008-2018). Revisión bibliométrica de los principales avances de conocimiento empírico en el ámbito de la gestión de comunicación*. Trabajo de fin de máster, inédito. Universidad Rey Juan Carlos, Campus de Fuenlabrada (Madrid), España.

Riesgos de la brecha digital de género entre los y las adolescentes

The risks of the gender digital divide among teenagers

Maria-Jose Masanet; Fernanda Pires; Lorena Gómez-Puertas

Cómo citar este artículo:

Masanet, Maria-Jose; **Pires, Fernanda**; **Gómez-Puertas, Lorena** (2021). "Riesgos de la brecha digital de género entre los y las adolescentes". *Profesional de la información*, v. 30, n. 1, e300112.

https://doi.org/10.3145/epi.2021.ene.12

Artículo recibido el 26-04-2020
Aceptación definitiva: 09-09-2020

Maria-Jose Masanet ✉
https://orcid.org/0000-0002-1217-9840

Profesora lectora Serra Húnter
Universitat de Barcelona
Fac. d'Informació i Mitjans Audiovisuals
Melcior de Palau, 140
08014 Barcelona, España
mjose.masanet@ub.edu

Fernanda Pires
https://orcid.org/0000-0001-6172-7594

Profesora lectora Serra Húnter
Universitat Autònoma de Barcelona,
Departament de Comunicació Audiovisual
i Publicitat
08193 Bellaterra (Barcelona), España
fernanda.pires@uab.cat

Lorena Gómez-Puertas
https://orcid.org/0000-0003-2203-8352

Universitat Pompeu Fabra
Departament de Comunicació
Roc Boronat, 138
08018 Barcelona, España
lorena.gomez@upf.edu

Resumen

Se analiza la brecha digital de género entre adolescentes de siete países de Europa, en Australia y países de Sudamérica a través de una perspectiva socio-cultural, comparando qué hábitos de uso y consumo son atribuidos y desempeñados por adolescentes en los múltiples medios y redes sociales y si ellos se enmarcan en roles estereotipados de género. Los datos se extraen del proyecto de investigación *Transmedia literacy* (2015-2018), que tenía cómo objetivos principales explorar qué están haciendo los adolescentes con los medios y cómo aprendieron a hacerlo. Para ello, se realizó un acercamiento etnográfico utilizando varios métodos de investigación como cuestionarios, entrevistas y observación participante, entre otros. En ese artículo nos centramos en el análisis del cuestionario implementado para mapear los hábitos de uso y consumo mediático de los adolescentes (N=1.520). Para responder a los objetivos del artículo se ha llevado a cabo un análisis descriptivo univariante y bivariante. Los resultados demuestran que la brecha digital de género sigue existiendo y que toma forma a través de la pervivencia de estereotipos de género y de roles asociados a los hombres y mujeres y su relación con las tecnologías y medios de comunicación, como es el caso de los videojuegos (asociados a los chicos) y de la creación de relatos (asociado a las chicas).

Palabras clave

Brecha digital; Brecha digital de género; Diferencias de género; Hábitos; Consumo; Estereotipos de género; Adolescencia; Jóvenes; Videojuegos; Relato; Narrativas; Redes sociales: Aplicaciones; Apps.

Abstract

The gender digital divide between teens from seven countries in Europe, in Australia, and in countries of South America through a socio-cultural perspective is analyzed. The article compares which habits of use and consumption are attributed and performed by adolescents in multiple media and social media, and explores if these uses are grounded in the historically established gender roles. The data come from the *Transmedia literacy* research project (2015-2018) that had two main objectives: to explore what are teens doing with media and how have they learned to do it. An ethnographic approach was used, combining various research methods as questionnaires, interviews and participant observation, among others. In this article we focus on the analysis of the questionnaire implemented to map teens' habits of use and consumption (N=1,520). To respond to the objective of the article, a descriptive univariate and bivariate analysis was carried out. The results show that the digital gender divide still exists and it takes shape through the persistence of gender stereotypes and roles associated to men and women and their relationship with media such as videogames practices (associated with boys) and the creation of stories (associated with girls).

Keywords

Digital divide; Gender digital divide; Gender differences; Gender stereotypes; Habits; Consumption; Adolescence; Young people; Youth; Teenagers; Videogames; Storytelling; Social networks; Applications; Internet.

Financiación

Este artículo forma parte del proyecto *Transmedia literacy* que ha recibido financiación del *Horizon 2020 Research and Innovation Program* de la Unión Europea (acuerdo n. 645238).

Agradecimiento

Agradecemos a Miguel Oliva, profesor de la *Universidad Nacional de Tres de Febrero* (*Untref*), Argentina, y experto en metodologías y estadísticas aplicadas a las ciencias sociales, la revisión de este texto. También a Pedro Jacobetty, de la *University of Edinburgh*, por el asesoramiento metodológico.

1. Introducción y marco teórico

El concepto de brecha digital se ha asociado originalmente al nivel de acceso a las tecnologías de la información y la comunicación (TIC) (**Correa**, 2010; **Hargittai**; **Walejko**, 2008). En sociedades con alta penetración de las TIC, se viene abordando el fenómeno mirando hacia un segundo nivel que observa los usos, las competencias comunicativas y las habilidades creativas e instrumentales (**Van-Deursen**; **Van-Dijk**, 2009). **Ragnedda** (2017) superpone un tercer nivel que se centra en los beneficios sociales y culturales obtenidos a través de cualquier tecnología. Este nivel sitúa la brecha digital como parte de una estructura social polarizada que puede agravar las desigualdades económicas, sociales y culturales preexistentes.

Los últimos dos niveles suponen una revisión a las visiones más optimistas respecto al cierre de la brecha digital basado en el proceso de 'normalización' tras la reducción de costes y la simplificación de interfaces digitales. Así, del problema de acceso pasamos a las desigualdades en términos de habilidades, motivación, capital digital y capacidad de sacar ventaja de las tecnologías.

> La brecha digital de género se sustentaría endémicamente en los roles que proveen las expectativas sociales y dan forma al uso masculino o femenino de la tecnología

Si bien la brecha de acceso material o físico es la que concentra mayor interés político por la capacidad de intervención inmediata (distribución de dispositivos y conexión), el acceso mental o falta de interés en las TIC es el que originalmente ha sostenido la brecha digital de género, como la supuesta actitud tecnófoba de las mujeres (**Cooper**, 2006). Así, la brecha digital de género se sustentaría endémicamente en los roles que proveen las expectativas sociales y dan forma al uso masculino o femenino de la tecnología.

En este artículo nos ocupamos de la exploración de la brecha digital de género con adolescentes de varios países de Europa, en Australia y países de Sudamérica, teniendo en cuenta no solo el concepto de acceso sino también de uso (consumo y producción). Para ello, trabajamos con los datos del proyecto *Transmedia literacy* (2015-2018). Los objetivos principales de la investigación eran explorar qué están haciendo los adolescentes con los medios y cómo están aprendiendo a hacerlo (**Scolari**; **Masanet**; **Guerrero-Pico**; **Establés**, 2018). Durante el proceso de recogida y análisis de datos observamos diferencias de género que serán exploradas en este artículo.

El acceso a las tecnologías en los países desarrollados parece no mantener diferencias de género (**Robinson** *et al.*, 2015), pero esto no implica igualdad porque la brecha persiste en el rango de actividades que realizan. Las habilidades y patrones de uso y producción son factores de diferenciación entre los jóvenes. Varios autores diferencian consumidores de productores como parte de una brecha significativa entre los y las jóvenes, especialmente en la integración al mercado laboral (**Resta** *et al.*, 2018). Este trabajo pretende contribuir también al conocimiento sobre cómo las tecnologías digitales multimodales promueven la cultura participativa y si es este aspecto de las nuevas alfabetizaciones lo que motiva a los jóvenes (**Dolan**, 2016). Aquí es especialmente relevante la variable género en comparativa transnacional, visto el remanente proceso de alfabetización escrita y acceso a la tecnología en países en desarrollo.

Hoffman, **Lutz** y **Meckel** (2015) abordan la participación online como aspecto crucial de la brecha digital, entendida como creación de contenidos compartidos con audiencias interesadas para afectar el entorno social,

> "identificar y coordinar comunidades de interés, buscar ayuda y apoyo mutuo y facilitar la agenda de esfuerzos" (p. 696).

Los autores exploran de qué modo variables como la edad o el género afectan a la brecha de participación de acuerdo con factores cognitivos como la autoeficacia (*self-efficacy)* o la preocupación por la privacidad, en contraste con las ideas tecnófobas de ansiedad femenina frente a las TIC (**Schradie**, 2011). Y confirman que son los jóvenes, hombres, de alto estatus y mejor nivel educativo quienes más se implican y benefician de la participación online. Este sesgo de género viene determinado por los condicionantes sociales previos, ya que los hombres tienen mayor acceso a ordenadores e internet y los usan más que las mujeres pero, además, reciben más formación tecnológica y están más motivados que las mujeres frente a dicha formación (**Dixon** *et al.*, 2014). En este punto planteamos las primeras hipótesis:

> Si bien la brecha de acceso material o físico es la que concentra mayor interés político por la capacidad de intervención inmediata, la falta de interés en las TIC es lo que originalmente ha sostenido la brecha digital de género, como la supuesta actitud tecnófoba de las mujeres

H1: No se encuentran diferencias de género en relación al acceso a las tecnologías.

H2: Se encuentran diferencias de género en el uso/consumo que los/as adolescentes hacen.

H3: Se encuentran diferencias de género en la producción que los/as adolescentes hacen.

También se detectan matices de uso/beneficio de las TIC según el género de acuerdo con el tipo de actividad, como el caso de los videojuegos y la participación online, normalmente dominada por hombres (**Hargittai**; **Walejko**, 2008). Estas actividades constituyen un recurso que promueve capacidades comunicativas, creativas y lúdicas. No puede afirmarse que las mujeres sean menos competentes por naturaleza, sino que varían sus usos y capacidades según las motivaciones y actividades a realizar (**Cañón-Rodríguez**; **Grande-del-Prado**; **Cantón-Mayo**, 2016). Los jóvenes disfrutan las experiencias de ocio (juegos, música y compras) y las mujeres explotan el potencial comunicativo (**Fallows**, 2005 en **Hilbert**, 2011), especialmente en la adolescencia (**Dixon** *et al.*, 2014).

En el meta-análisis de las investigaciones sobre usos y habilidades digitales por género del período 1990-2015, **Joiner**, **Stewart** y **Beaney** (2015) dibujan claramente esta línea divisoria entre el juego online, las webs especializadas y el entretenimiento para ellos, frente a las redes sociales, el email o el teléfono para ellas. Por tanto, la brecha digital de género de segundo nivel no parece desaparecer con el tiempo y no hay consenso en las causas socioeconómicas o de cultura online que puedan explicarlo. Los autores apuntan cuestiones como la evitación del conflicto o la falta de autoestima como explicaciones de la menor implicación de las mujeres, pero también que los hombres tienen mejor actitud hacia la tecnología. Para **Robinson** *et al.* (2015) la conducta es una extensión de los roles sociales, los intereses y las expectativas existentes en la sociedad. Las mujeres tienden a subestimar sus propias habilidades y capacidades y esto tiene consecuencias en su motivación, implicación y conducta posterior. Esto nos lleva a las siguientes hipótesis:

H4: El ámbito lúdico, ligado a los videojuegos, sigue siendo principalmente masculino;

H5: El ámbito comunicativo, ligado a las redes sociales, sigue siendo principalmente femenino.

Encontramos estudios de caso nacionales en este sentido (**García-Martín**; **Cantón-Mayo**, 2019; **Calderón-Gómez**, 2019; **Dueñas-Cid** *et al.*, 2016; **Masanet**, 2016) pero pocos internacionales. Entre los informes vinculados a las variables de jóvenes y tecnología, destacan en ámbito nacional anglosajón: *Ofcom* (2019) en UK, *Mobile kids* de *Nielsen* (2017) o el seguimiento de reportes del *Pew Research Center* en EUA (**Anderson**; **Jiang**, 2018a,b). Todos ellos corroboran el incremento de "menores conectados" en las sociedades avanzadas: conectados a edades más tempranas durante más tiempo, especialmente gracias al acceso al smartphone, la tablet o el portátil de uso individualizado. Menores afines a redes sociales que varían según el país y el momento, el consumo de video-on-demand y los juegos online, donde las diferencias de género en cuanto a usos y habilidades digitales siguen la misma línea que las investigaciones precedentes –incluso acentuándose en la disposición y el uso libre del smartphone, mayor entre los chicos norteamericanos (56%, y hasta cinco veces superior en la población hispana)–.

En Europa, los datos provenientes del último *EU Kids online* (2020) se alinearían con estos hallazgos en términos generales. Esta encuesta sobre 19 países europeos (**Smahel** *et al.*, 2020) establece en la comparativa, con ligeras diferencias entre países, una mayor tendencia al juego online en los chicos y detecta un mayor control parental asociado a una percepción de riesgo más severo en las chicas. No marca, por tanto, una brecha digital de género importante entre los jóvenes europeos en cuanto al acceso, pero sí prevalente en las modalidades de usos y las consecuentes habilidades desarrolladas. Una tendencia que se acentúa también en Australia, donde se incide en patrones de sociabilización y consumo online diversos en adolescentes más autónomos (**Monksnet** *et al.*, 2019) y una digitalización más temprana (**Starkey**; **Eppel**; **Sylvester**, 2018; **Brunton**, 2015).

Algunas investigaciones similares llevadas a cabo en países en desarrollo, indican que, en igualdad de condiciones, las mujeres se perfilan como usuarias digitales incluso más activas que los hombres, lo que validaría el potencial de la tecnología para mejorar las condiciones

> Donde las diferencias de género son más destacadas es en el segundo nivel de la brecha digital: usos, competencias y habilidades

de desigualdad en las que viven. Sin embargo, variables como la educación, la ocupación o la edad condicionan la desigualdad digital de género no sólo en el acceso sino, y sobre todo, en el uso (o no uso) de la tecnología y el desarrollo de habilidades. **Rashid** (2016) en su comparativa entre Bangladesh, Brasil, Chile, Filipinas y Ghana detecta diferencias de género y apunta como factor determinante el nivel educativo y la habilidad de usar la tecnología en casa, incluso más que la edad o el nivel óptimo de inglés. Sus resultados se sitúan en la línea de los estudios precedentes en países africanos o asiáticos (**Milek**; **Stork**; **Gillwald**, 2011; **Zainudeen**; **Iqbal**; **Samarajiva**, 2010 en **Rashid**, 2016) y en la propuesta inicialmente formulada por **Hilbert** (2011) en torno a 12 países de Latinoamérica y 13 de África.

> Las mujeres tienden a subestimar sus propias habilidades y capacidades digitales, lo que las inhibe a la hora de compartir sus creaciones

Y en esta observación del segundo nivel de la brecha digital de género, **Gray**, **Gainous** y **Wagner** (2017) analizan los datos de *Latin Barometer* (*UN Gender inequality index*) para concluir que los hombres buscan más información política y usan las redes sociales más que las mujeres, de manera que la brecha digital, más allá del acceso (su naturaleza, frecuencia o calidad), se sostienen en esta región por los usos. Las mujeres en América Latina no sólo son

> "usuarias desproporcionadamente más moderadas de internet, sino que los hombres se conectan con más frecuencia" (**Gray** *et al.*, 2017, p. 5).

Esto afecta al capital social, la participación política, la conexión humana y redunda en la desigualdad social de base. Lo confirman **Barrantes-Cáceres** y **Cozzubo-Chaparro** (2017), al comparar la encuesta transnacional *AAS* de cinco países de Sudamérica para evaluar los mecanismos de la brecha digital de género: tanto el nivel educativo y socioeconómico como el rol y la ocupación son factores determinantes en Argentina, Colombia y Paraguay, además de la edad o el hábitat rural; mientras que en países como Perú o Guatemala, donde la variedad lingüística y étnica es mayor, se requeriría considerar otras variables explicativas (como los estereotipos de género). En todos los países analizados, las mujeres más jóvenes, y en hogares con hijos menores (pese a la reducción de tiempo de ocio que esto supone), ven algo más reducida la brecha digital, lo que sostiene la variable edad como aminoración progresiva de la brecha digital de segundo nivel.

Pese a todo este amplio marco de investigación en auge, siguen siendo muy escasos los estudios comparativos internacionales que permitan rastrear, tan siquiera indiciariamente, en qué aspectos y variables se mueve la brecha digital de género entre los y las adolescentes de diferentes regiones del mundo hoy en día, para, tal y como indica **Martínez-Cantos** (2017, p. 16) en su revisión de *Eurostat*, 2007-2014, atender a disparidades que "podrían indicar una reproducción de brechas de género relativas y contextualizadas": Aquí es donde se sitúa este artículo.

2. Material y métodos

2.1. Objetivos y diseño del estudio

El artículo se enmarca en la primera etapa del proyecto *Transmedia literacy*: el mapeo etnográfico a través de un cuestionario. Y tiene el objetivo de analizar las diferencias de género en el acceso y hábitos de uso y consumo de los/as adolescentes para explorar la pervivencia de estereotipos.

La investigación se llevó a cabo entre 2015 y 2018 en Australia, Colombia, España, Finlandia, Italia, Portugal, Reino Unido y Uruguay. El proyecto tenía un acercamiento etnográfico y se siguieron los preceptos de la etnografía de plazos cortos (**Pink**; **Morgan**, 2013). La etnografía de plazos cortos devino especialmente apropiada para este estudio –desarrollado en tres años y llevado a cabo en diferentes contextos y realidades educativas–, ya que permite su realización en periodos de tiempo más breves que la etnografía tradicional y también permite la creación de contextos en que se facilita profundizar de manera más rápida en los objetivos de la investigación (talleres creativos, por ejemplo). Una vez diseñados y aplicados los protocolos éticos y de gestión de datos, se siguieron 5 pasos (detallados en **Scolari**; **Ardèvol**; **Pérez-Latorre**; **Masanet**; **Lugo-Rodríguez**, 2020): 1) cuestionario con preguntas sobre el contexto sociocultural, acceso y preferencias mediáticas; 2) talleres sobre videojuegos, cultura participativa y redes sociales; 3) entrevistas en profundidad; 4) diario mediático de una semana; 5) exploración de comunidades online, webs y redes sociales significativas para los/las adolescentes.

En este artículo nos centramos exclusivamente en los datos extraídos del cuestionario.

2.2. Cuestionario

El cuestionario tenía el objetivo de identificar las características de la muestra en relación al acceso y hábitos de uso y consumo de medios (**Ardèvol**, 2017). Por ser un mapeo inicial etnográfico, el equipo de Reino Unido optó por adaptar el cuestionario a su contexto específico y ha quedado fuera del análisis del artículo.

Trabajamos con tres bloques del cuestionario:

1) Preguntas sociodemográficas descriptivas (sexo, edad, etc.);

2) Preguntas sobre acceso y uso de los medios y dispositivos (dicotómicas);

3) Preguntas sobre el tiempo dedicado a actividades mediáticas y el grado de acuerdo en las afirmaciones. Este bloque se divide en cuatro partes: a) mirar, escuchar, leer y analizar; b) jugar; c) producir, comentar y compartir; y d) buscar, explorar y organizar.

Las preguntas del bloque 3 son tipo Likert de cinco puntos. En el caso del tiempo dedicado a las actividades los puntos se distribuyen de la siguiente manera: 1= nunca; 2= menos de dos veces al mes; 3= dos o más veces al mes; 4= dos o más veces a la semana; 5= cada día. En el caso de las preguntas centradas en afirmaciones los puntos se distribuyen en: 1= total desacuerdo; 2= desacuerdo; 3= ni en desacuerdo ni de acuerdo; 4= de acuerdo; 5= muy de acuerdo.

2.3. Análisis

El análisis se llevó a cabo con el programa estadístico *SPSS-19* y comprendió un análisis descriptivo univariante y bivariante. Se realizaron tablas de contingencia con dos variables para testear las diferencias entre dos grupos (mujer/hombre) aplicando el coeficiente *V-de Cramer* e interpretando la fuerza de la asociación. Se analizaron las diferencias entre las medias de los dos grupos estudiados en relación al consumo de los medios y el grado de acuerdo con las afirmaciones.

2.4. Selección y caracterización de la muestra

En primer lugar, la selección de los 8 países participantes se basó en el *Programme for International Student Assessment* (*PISA*), un estudio mundial realizado por la *Organización para la Cooperación y el Desarrollo Económico* (*OCDE*). El programa analiza el rendimiento escolar de los estudiantes de 15 años en varias materias como, por ejemplo, las matemáticas. La selección de los países se realizó teniendo en cuenta la última versión del estudio (2012) durante la preparación de la memoria del proyecto. La lista *PISA* de 66 países se dividió en tercios y se extrajeron países de cada uno de ellos para cubrir diferentes situaciones culturales, sociales y educativas. En el primer tercio se seleccionó Australia, Finlandia y Reino Unido. En el segundo España, Italia y Portugal. Por último, en el tercero se seleccionó Colombia y Uruguay.

Entre dos y cuatro escuelas de cada país participaron en el estudio. Se utilizó un muestreo no probabilístico de conveniencia (a causa de las dificultades que conlleva trabajar con menores de edad). Los protocolos éticos y de gestión de datos no nos permitieron acceden a una muestra aleatoria, ya que el acceso a los adolescentes se debía hacer a partir de los centros educativos y una vez en ellos era la dirección del centro quién decidía qué grupos de estudiantes podían participar en el estudio (siempre atendiendo a las demandas del proyecto de investigación). A posteriori, se necesitaba el consentimiento de los/as menores y de sus padres, madres o tutores/as legales para poder participar. A pesar de ello, se intentó hacer una selección de centros que representara la realidad de los países participantes y, por lo tanto, fuera representativa de cada contexto. Entre dos y cuatro escuelas de cada país participaron en el proyecto, dependiendo de las diferentes situaciones educativas. Los siguientes criterios de las escuelas se consideraron como dicotomías para la selección: privado *vs* público, periferia *vs* central, urbano *vs* rural, vanguardista o innovador *vs* modelo educativo más convencional, diversidad cultural y étnica *vs* homogeneidad en la composición demográfica del estudiantado; y las políticas de la escuela con respecto a implementación de las TIC (cada país seleccionó los criterios que eran más relevantes en su contexto particular, pero en general, dos o tres criterios estaban relacionados). Cada país realizó un informe exploratorio de su contexto con datos socio-económicos, culturales y educativos para justificar la selección de una muestra representativa para el estudio.

Teniendo en cuenta estas restricciones en el procedimiento de muestreo, los tests de diferencias de medias se realizan de forma indicativa y descriptiva.

La muestra se compone de 1.520 cuestionarios: países de Europa (N=348), Australia (N=860) y países de Sudamérica (N=312). Se agruparon los países siguiendo esta distribución para respetar las diferencias socioeconómicas y culturales. En la tabla 1 se presenta la caracterización de la muestra.

Tabla 1. Caracterización de la muestra

		Países de Europa		**Australia**		**Países de Sudamérica**	
Media de edad		14,93		14,28		14,82	
		n	**%**	**n**	**%**	**n**	**%**
El/la participante se define como…	Hombre	179	51,4	503	58,5	163	52,2
	Mujer	167	48,0	348	40,5	146	46,8
	No se define	2	0,6	9	1,0	3	1,0
Vive con…	Madre, padre y/o hermano/a	279	80,2	646	75,1	159	51,0
	Madre (y otros familiares)	53	15,2	107	12,4	116	37,2
	Padre (y otros familiares)	8	2,3	25	2,9	23	7,4
	Otras situaciones	8	2,3	82	9,5	14	4,5
Nivel estudios de la madre	Secundaria	153	44,0	188	21,9	146	46,8
	Universitaria	130	37,4	514	59,8	60	19,2
Nivel estudios del padre	Secundaria	152	43,7	212	24,7	130	41,7
	Universitaria	112	32,2	485	56,4	57	18,3

La muestra tiene características homogéneas en relación a la edad y el sexo, pero hay diferencias en las composiciones familiares y el nivel de estudios de madres y padres. En Europa y Australia estos datos son similares, pero en Sudamérica hay un porcentaje superior de familias monoparentales (madres mayoritariamente) y el porcentaje de estudios de madres y padres es inferior.

> El entorno de los videojuegos sigue siendo mayoritariamente masculino, como ya indicaban investigaciones anteriores. Este es el punto del estudio donde las diferencias entre chicos y chicas son más notables en las tres áreas geográficas

3. Análisis

3.1. Acceso y uso de dispositivos, programas y redes

Se preguntó a los participantes qué dispositivos tenían en casa (tabla 2)[1]. Los datos de los países de Europa y Australia son similares en este sentido, mientras que en Sudamérica no se encuentran diferencias con la TV, la radio y la wi-fi pero sí con el resto de dispositivos.

En relación con las diferencias según el sexo, en Europa y Australia únicamente se encuentran diferencias significativas con el acceso en casa a la 'consola no portátil' (*V-de Cramer Europa*=0,201[2]; Australia=0,134). Y en Australia también con la 'consola portátil' (*V-de Cramer*=0,132). En Sudamérica se encuentran diferencias con la 'consola no portátil' (*V-de Cramer*=0,301) y con la 'consola portátil' (*V-de Cramer*=0,220), pero también con el 'MP3' (*V-de Cramer*=0,141), 'ordenador de mesa' (*V-de Cramer*=0,162), 'tablet' (*V-de Cramer*=0,176) y 'cámara de vídeo' (*V-de Cramer*=0,136). En todas ellas los chicos tienen más acceso. Es interesante que en Europa y Australia únicamente se encuentren diferencias con las consolas, siendo los chicos los que tienen más acceso (Europa: 95,5% chicos y 83,2% chicas; Australia: 81,1% chicos y 69,5% chicas).

Tabla 2. ¿Qué dispositivos tienes en casa?

		Dispositivos											
		TV	**MP3**	**Ordenador de mesa**	**Ordenador portátil**	**Móvil**	**Tablet**	**Wi-fi**	**Consola (Wii…)**	**Consola portátil**	**Cámara de vídeo**	**Cámara de fotos**	**Radio**
Países de Europa	Mujer	99,4% N=166	77,2% N=129	61,1% N=102	92,8% N=155	100% N=167	79,0% N=132	93,4% N=156	83,2%** N=139	58,7% N=98	71,9% N=120	96,4% N=161	82,0% N=137
	Hombre	96,6% N=173	78,2% N=140	70,4% N=126	93,3% N=167	98,9% N=177	80,3% N=143	95,0% N=170	95,5%** N=171	65,2% N=116	69,3% N=124	92,7% N=166	78,8% N=141
Australia	Mujer	95,1% N=331	56,4% N=195	65,2% N=227	94,8% N=330	97,4% N=338	73,3% N=255	95,4% N=332	69,5%** N=242	32,8%** N=114	62,4% N=217	78,2% N=272	65,2% N=227
	Hombre	96,2% N=483	55,8% N=280	68,1% N=342	94,2% N=474	96,6% N=485	75,0% N=376	96,0% N=481	81,1%** N=408	45,9%** N=231	67,6% N=340	76,1% N=382	59,6% N=300
Países de Sudamérica	Mujer	97,9% N=143	39,3%* N=57	52,7%** N=77	61,6% N=90	85,6% N=125	43,2%** N=63	82,9% N=121	29,5%** N=43	6,8%** N=10	35,6%* N=52	61,0% N=89	66,4% N=97
	Hombre	99,4% N=162	53,4%* N=87	68,5%** N=111	55,8% N=91	92,0% N=150	60,7%** N=99	87,7% N=142	59,5%** N=97	22,7%** N=37	49,1%* N=80	69,9% N=114	71,8% N=117

Descripción: gl=1; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

A continuación preguntamos a los adolescentes qué dispositivos utilizaban habitualmente (tabla 3) y también se encuentran diferencias significativas basadas en el sexo en el uso de las consolas. Los chicos utilizan significativamente más que las chicas la 'consola' (Europa: *V-de Cramer*=0,337; Australia: *V-de Cramer*=0,315; Sudamérica: *V-de Cramer*=0,395) y la 'consola portátil' (Europa: *V-de Cramer*=0,133; Australia: *V-de Cramer*=0,118; Sudamérica: *V-de Cramer*=0,238). El 'ordenador de mesa' también es más utilizado por los chicos (*V-de Cramer Europa*=0,137; Australia=0,176; Sudamérica=0,144).

Por contra, encontramos diferencias que indican que algunos dispositivos son más utilizados por las chicas. Por ejemplo, en Europa y Australia las chicas utilizan más que los chicos la 'cámara de fotos' (*V-de Cramer* Europa=0,262; Australia=0,141) y la 'radio' (*V-de Cramer Europa*=0,106; Australia=0,106). Además, en Europa las chicas utilizan más que los chicos la 'TV' (*V-de Cramer*=0,108) y en Australia el 'Móvil' (*V-de Cramer*=0,104).

> Las chicas son las principales productoras de relatos y fotos y los chicos de vídeos para compartir. Se da una situación interesante: parece ser que ellas son las que crean más contenido, pero ellos quienes comparten más, haciendo más evidente su participación online

Tabla 3. ¿Qué dispositivos utilizas habitualmente?

		Dispositivos											
		TV	MP3	Ordenador de mesa	Ordenador portátil	Móvil	Tablet	Wi-fi	Consola (Wii…)	Consola portátil	Cámara de vídeo	Cámara de fotos	Radio
Países de Europa	Mujer	89,2%* N=149	27,5% N=46	28,7%* N=48	65,3% N=109	98,2% N=164	43,7% N=73	88,6% N=148	23,4%** N=39	6,0%* N=10	9,0% N=15	35,9%** N=60	24,1%* N=40
	Hombre	81,6%* N=146	28,5% N=51	41,9%* N=75	64,2% N=115	94,4% N=169	41,3% N=74	88,8% N=159	56,4%** N=101	14,0%* N=25	10,6% N=19	13,4%** N=24	15,6%* N=28
Australia	Mujer	63,2% N=220	13,3% N=46	16,1%** N=56	83,3% N=290	88,8%** N=309	34,8% N=121	87,6% N=305	16,7%** N=58	3,2%** N=11	8,6% N=30	20,7%** N=72	16,4%** N=57
	Hombre	64,4% N=324	13,5% N=68	31,6%** N=159	78,7% N=395	81,1%** N=407	31,8% N=160	87,2% N=437	47,1%** N=237	9,2%** N=46	8,2% N=41	10,5%** N=53	9,3%** N=47
Países de Sudamérica	Mujer	83,6% N=122	21,4% N=31	33,1%* N=48	43,8% N=64	77,4% N=113	21,2%* N=31	74,7% N=109	11,6%** N=17	2,1%** N=3	24,0% N=35	61,0%* N=89	26,7% N=39
	Hombre	85,9% N=140	29,4% N=48	47,2%* N=77	42,3% N=69	74,5% N=120	32,5%* N=53	81,6% N=133	48,1%** N=78	16,0%** N=26	14,1% N=23	69,9%* N=114	20,9% N=34

Descripción: gl=1; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

También se pidió a los adolescentes qué programas utilizaban habitualmente (tabla 4). De nuevo, observamos diferencias en las tres áreas. Estas se encuentran en el uso de los programas de 'edición de foto', 'programación' y 'guion/escritura'. Las chicas utilizan más los programas de 'edición de fotos' en las tres áreas (*V-de Cramer Europa*=0,199; Australia=0,115; Sudamérica=0,264). Estas diferencias se acentúan en Sudamérica, donde el porcentaje de chicas que los usa supera en más de un 25% al de chicos. En Europa casi un 20% más de las chicas los utiliza. Los programas de 'guion/escritura' son también más utilizados por las chicas (*V-de Cramer Europa*=0,235; Australia=0,221; Sudamérica=0,167). Las diferencias de uso sobrepasan el 10% en las tres áreas.

Contrario es el caso de los softwares de 'programación', que utilizan más los chicos (*V-de Cramer Europa*=0,202; Australia=0,127; Sudamérica=0,254). Por último, se encuentran diferencias específicas en las diferentes áreas. En Australia los chicos utilizan más los programas de 'dibujo' (*V-de Cramer*=0,086) y en Sudamérica los programas de 'edición web/blog' (*V-de Cramer*=0,191).

Tabla 4. ¿Qué programas utilizas habitualmente?

		Programas							
		Proceso de textos	Edición de fotos	Edición de vídeo	Edición de web/blog	Dibujo	Creación de música	Programación	Guion / escritura
Países de Europa	Mujer	66,5% N=111	50,9%** N=85	18,6% N=31	7,8% N=13	16,8% N=28	22,3% N=37	2,4%** N=4	23,4%** N=39
	Hombre	56,4% N=101	31,3%** N=56	26,3% N=47	3,9% N=7	12,8% N=23	29,1% N=52	13,4%** N=24	6,7%** N=12
Australia	Mujer	78,4% N=273	34,2%** N=119	13,8% N=48	17,0% N=59	12,9%* N=65	22,1% N=77	2,3%** N=8	21,6%** N=75
	Hombre	79,3% N=399	23,7%** N=119	18,9% N=95	16,7% N=84	19,3%* N=67	17,5% N=88	8,4%** N=42	6,6%** N=33
Países de Sudamérica	Mujer	56,2% N=82	58,2%** N=85	18,5% N=27	15,1%** N=22	22,6% N=33	33,6% N=49	9,6%** N=14	18,5%** N=27
	Hombre	52,1% N=85	31,9%** N=52	25,2% N=41	31,3%** N=51	28,2% N=46	32,5% N=53	30,1%** N=49	7,4%** N=12

Descripción: gl=1; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

La tabla 5 ofrece datos sobre el uso de redes sociales. En Europa (*V-de Cramer*=0,266), Australia (*V-de Cramer*=0,205) y Sudamérica (*V-de Cramer*=0,139) las chicas utilizan alrededor de un 20% más que los chicos *Instagram*. Similar es el caso de *Snapchat* (*V-de Cramer Europa*= 0,298; Australia=0,244; Sudamérica=0,195). El uso en Sudamérica es muy inferior en relación a las otras dos áreas, pero la diferencia entre chicos y chicas sigue siendo significativa. En general las chicas son más usuarias de las redes sociales. *YouTube* es la única red que los chicos utilizan más y la diferencia únicamente es significativa en Europa (*V-de Cramer*=0,113).

Encontramos también diferencias específicas en las áreas. En Sudamérica *Facebook* es una de las redes más utilizadas, con más de un 90%. Los porcentajes descienden a casi el 70% en Europa y a alrededor del 50% en Australia. *WhatsApp* también merece mención. En Europa es utilizada por alrededor del 90% de los adolescentes mientras que en Australia no llega al 20% y en Sudamérica únicamente la utilizan entre el 15-30%. Por su parte, *Snapchat* se mueve entre el 50-70% en Europa y Australia y entre el 15-30% en Sudamérica. *YouTube* es la única red que utiliza más del 80% de los adolescentes en los tres casos, deviniendo una de las redes más populares internacionalmente.

Tabla 5. ¿Qué redes sociales utilizas habitualmente?

		Redes sociales						
		Facebook	***Twitter***	***Instagram***	***WhatsApp***	***Snapchat***	***YouTube***	**Foros / blogs**
Países de Europa	Mujer	67,7% N=113	21,0% N=35	83,8%** N=140	90,4% N=151	76,0%** N=127	94,0%* N=157	13,2% N=22
	Hombre	69,3% N=124	24,6% N=44	59,8%** N=107	89,9% N=161	46,9%** N=84	98,3%* N=176	8,4% N=15
Australia	Mujer	49,4% N=172	16,4% N=57	81,3%** N=283	18,7% N=65	76,7%** N=267	83,0% N=289	8,9% N=31
	Hombre	52,4% N=263	15,7% N=79	62,3%** N=312	13,7% N=69	52,7%** N=265	85,1% N=427	11,1% N=56
Países de Sudamérica	Mujer	93,8% N=135	28,3% N=41	59,3%* N=86	82,1% N=119	31,0%** N=45	94,5% N=137	13,1% N=19
	Hombre	92,6% N=151	38,0% N=62	45,4%* N=74	77,9% N=127	14,7%** N=24	92,6% N=151	16,0% N=26

Descripción: gl=1; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

3.2. Mirar, escuchar, leer y analizar

Les pedimos que indicaran también el tiempo dedicado y el grado de acuerdo con una serie de actividades y afirmaciones relacionadas con los hábitos de consumo mediático (tabla 6). En Europa y Australia las chicas dedican en prácticamente todos los casos más tiempo que los chicos a las actividades señaladas. Solo encontramos la excepción 'leer cómics', que es realizada mayoritariamente por los chicos (Europa: t=4,089; Australia: t=3,548). En Europa las chicas dedican más tiempo a 'ver la TV' (t=-3,018, p=0,003), 'escuchar la radio' (t=-4,120) y 'leer libros' (t=-4,271). En Australia las chicas dedican más tiempo a 'ver películas y/o series online' (t=-3,432), 'escuchan la radio' (t=-4,048), 'leer revistas y/o diarios en papel' (t=-2,011) y 'leer libros' (t=-4,511). En Sudamérica la única diferencia se encuentra en el caso 'escuchar la radio' (t=-3,295), siendo las chicas quién lo hacen más.

En relación a las afirmaciones, las chicas están más de acuerdo que los chicos con 'cuando vamos a casa de los/as amigos/as solemos ver unas series' (Europa: t=-3,938; Australia: t=-7,234). En cambio, los chicos están más de acuerdo con la afirmación 'me gusta mirar los canales de *YouTube*' (Europa: t=2,293; Australia: t=2,785).

La afirmación con la que los participantes están más de acuerdo en los tres casos es 'me gusta mirar los ca-

Tabla 6. Mirar, escuchar, leer y analizar

Tiempo dedicado (escala de 1 a 5)				
Actividades		**Países de Europa**	**Australia**	**Países de Sudamérica**
Ver la TV	Mujer	4,59**	3,67	4,33
	Hombre	4,28**	3,66	4,34
Ver películas y/o series online	Mujer	3,35	3,81**	3,13
	Hombre	3,33	3,53**	3,33
Escuchar la radio	Mujer	3,26**	3,10**	2,90**
	Hombre	2,59**	2,67**	2,34**
Leer revistas y/o diarios en papel	Mujer	2,25	2,27*	2,30
	Hombre	2,21	2,10*	2,16
Leer libros	Mujer	2,99**	3,69**	2,78
	Hombre	2,43**	3,28**	2,56
Leer cómics	Mujer	1,57**	1,84**	2,15
	Hombre	2,08**	2,16**	2,43
Ir al cine	Mujer	2,34	2,53	2,64
	Hombre	2,32	2,51	2,72
Grado de acuerdo				
Afirmaciones		**Países de Europa**	**Australia**	**Países de Sudamérica**
Cuando llego a casa me gusta mirar la televisión a ver qué ponen	Mujer	3,26	2,53	3,80
	Hombre	3,13	2,38	3,52
Me gusta mirar los canales de *YouTube*	Mujer	4,02*	3,97**	3,92
	Hombre	4,30*	4,21**	4,16
Cuando vamos a casa de los/as amigos/as solemos ver vídeos	Mujer	2,85	3,11	2,79
	Hombre	3,03	2,97	3,04
Cuando vamos a casa de los/as amigos/as solemos ver una serie	Mujer	2,75**	2,85**	2,43
	Hombre	2,23**	2,23**	2,29
Me fijo en cómo está echa una película (planos, colores, *making off*, etc.)	Mujer	2,84	2,90	2,87
	Hombre	3,01	2,86	2,85

Descripción: Actividades: 1=nunca y 5=cada día; Afirmaciones: 1=muy en desacuerdo y 5=muy de acuerdo; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

nales de *YouTube*' (media superior a 3,9). En Europa y Sudamérica esta afirmación viene seguida de 'cuando llego a casa me gusta mirar la televisión a ver qué hacen', destacando la importancia que la televisión sigue teniendo para los adolescentes. Australia es la excepción en este sentido, teniendo una media alrededor del 2,5, alejada de la mínima de 3,13 de Europa y de las medias superiores a 3,5 de Sudamérica. En los tres casos es elevado el grado de acuerdo con 'cuando vamos a casa de los/as amigos/as solemos ver vídeos' (alrededor de 3).

3.3. Jugar

Los participantes podían responder a dos actividades y a dos afirmaciones relacionadas con 'jugar' siguiendo el formato anterior. En todas las cuestiones sobre videojuegos se encuentran diferencias entre chicos y chicas (tabla 7). En las tres áreas los chicos dedican más tiempo a 'jugar a videojuegos'. En Europa los chicos dedican una media de 4,11 de tiempo mientras que las chicas de 2,55 (t=12,386). En Australia los chicos dedican una media de 3,79 frente al 2,16 de las chicas (t=18,665). Por último, en Sudamérica los chicos dedicar una media de 4,10 y las chicas de 2,30 (t=13,031).

Lo mismo ocurre con las afirmaciones. En relación a 'me gusta jugar a videojuegos con los/as amigos/as online' en Europa los chicos están más de acuerdo (media=4,20) que las chicas (media=2,13) (t=14,552). En Australia se da el mismo caso: 3,55 de los chicos y 1,86 de las chicas (t=17,613). Por último, en Sudamérica también están más de acuerdo los chicos (3,74) que las chicas (1,98) (t=10,248). Más diferencia todavía se encuentra en la segunda afirmación: 'cuando vamos a casa de los/as amigos/as solemos jugar a videojuegos' (Europa: t=14,053; Australia: t=18,892; Sudamérica: t=12,857).

Tabla 7. Jugar

Tiempo dedicado (escala de 1 a 5)				
Actividades		**Países de Europa**	**Australia**	**Países de Sudamérica**
Jugar a videojuegos	Mujer	2,55**	2,16**	2,30**
	Hombre	4,11**	3,79**	4,10**
Jugar a juegos de mesa	Mujer	1,96	1,97	2,01
	Hombre	2,11	2,07	2,19
Grado de acuerdo				
Afirmaciones		**Países de Europa**	**Australia**	**Países de Sudamérica**
Me gusta jugar a videojuegos con los/as amigos/as online	Mujer	2,13**	1,86**	1,98**
	Hombre	4,20**	3,55**	3,74**
Cuando vamos a casa de los/as amigos/as solemos jugar a videojuegos	Mujer	1,98**	1,84**	2,01**
	Hombre	3,88**	3,46**	3,90**

Descripción: Actividades: 1=nunca y 5=cada día; Afirmaciones: 1=muy en desacuerdo y 5=muy de acuerdo; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

3.4. Producir, comentar y compartir

Al contrario que en el apartado anterior, en el ámbito de la producción destacan las chicas (tabla 8). Esto nos indica que mientras ellos se centran en lo lúdico ellas en la producción de relatos. En general las chicas están más de acuerdo con las afirmaciones relacionadas con 'hacer, comentar y compartir', a excepción de 'me gusta hacer vídeos y compartirlos', donde los chicos están más de acuerdo en Europa (t=3,159) y Australia (t=2,835), y 'me gusta inventar historias, crear juegos, tutoriales, etc.' (Europa: t=2,454).

En las tres áreas las chicas están más de acuerdo con 'me gusta hacer fotos y compartirlas' (Europa: t=-5,221; Australia: t=-9,311; Sudamérica: t=-6,898,), 'cuando vamos a casa de los/as amigos/as solemos hacer un vídeo' (Europa: t=-3,944; Australia: t=-2,858; Sudamérica: t=-2,052) y 'cuando una cosa me gusta la envío a los amigos al momento' (Europa: t=-2,346; Australia: t=-7,116; Sudamérica: t=-3,363,). El nivel de acuerdo de las chicas sigue siendo superior pero únicamente significativo en Australia en las siguientes afirmaciones: 'disfruto narrando historias de mis personajes preferidos' (t=-4,157), 'cuando una cosa me gusta la comento al momento en las redes' (t=-3,175,) y 'me gusta hacer *fanfiction* de mis series, películas y/o cómics preferidos' (Australia t=-2,897, pero con la excepción de Sudamérica).

3.5. Buscar, explorar y organizar

El ámbito 'buscar, explorar y organizar' también es predominantemente femenino, ya que son las chicas las que de manera general están más de acuerdo con las afirmaciones. Igualmente, también hay alguna excepción y está relacionada precisamente con los videojuegos: 'busco en internet vídeos de las partidas de mis videojuegos preferidos'. En este caso, los chicos están más de acuerdo (Europa: t=14,098; Australia: t=15,502; Sudamérica: t=9,438). También están los chicos más de acuerdo en Europa (t=2,294) y Sudamérica con la afirmación 'cuando quiero saber cómo hacer una cosa busco vídeos en internet como tutoriales, etc.'.

Tabla 8. Hacer, comentar y compartir

Tiempo dedicado (escala de 1 a 5)				
Actividades		**Países de Europa**	**Australia**	**Países de Sudamérica**
Utilizar las redes sociales	Mujer	4,80	4,53	4,51
	Hombre	4,58	4,11	4,53
Participar en blogs, webs, foros de internet, etc.	Mujer	1,79	2,06*	1,88*
	Hombre	2,02	1,83*	2,28*
Grado de acuerdo				
Afirmaciones		**Países de Europa**	**Australia**	**Países de Sudamérica**
Cuando vamos a casa de los/as amigos/as solemos hacer un vídeo	Mujer	2,28**	2,03**	2,15*
	Hombre	1,73**	1,80**	1,84*
Me gusta hacer vídeos y compartirlos	Mujer	1,56**	1,47**	1,64
	Hombre	1,96**	1,68**	1,87
Cuando una cosa me gusta la comento al momento en las redes	Mujer	2,18	2,67**	2,60
	Hombre	2,36	2,37**	2,30
Cuando una cosa me gusta la envío a los amigos al momento	Mujer	3,39*	3,90**	3,36**
	Hombre	3,05*	3,26**	2,81**
Me gusta hacer fotos y compartirlas	Mujer	3,33**	3,23**	3,62**
	Hombre	2,56**	2,33**	2,49**
Me gusta hacer *fanfiction* de mis series, películas y/o cómics preferidos	Mujer	1,85	1,71**	1,75
	Hombre	1,68	1,48**	1,87
Disfruto narrando historias de mis personajes preferidos	Mujer	2,13	2,50**	2,54
	Hombre	1,96	2,09**	2,37
Me gusta inventar historias, crear juegos, tutoriales, etc.	Mujer	1,69**	1,87	2,36
	Hombre	2,03**	2,01	2,52

Descripción: Actividades: 1=nunca y 5=cada día; Afirmaciones: 1=muy en desacuerdo y 5=muy de acuerdo; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

Por el contrario, las chicas están más de acuerdo en Europa y Australia con las afirmaciones ‘cuando puedo busco en internet mi serie preferida’ (Europa: t=-3,363; Australia: t=-4,579) y ‘me gusta hacer mis listas para escuchar música online’ (Europa: t=-2,700; Australia: t=-3,976). En el resto de afirmaciones las chicas siguen estando, por lo general, más de acuerdo pero las diferencias no son significativas.

Tabla 9. Buscar, explorar y organizar

Grado de acuerdo				
Actividades		**Países de Europa**	**Australia**	**Países de Sudamérica**
Cuando puedo busco en internet mi serie preferida	Mujer	3,69**	3,66**	3,77
	Hombre	3,19**	3,24**	3,48
Me gusta hacer mis listas para escuchar música online	Mujer	3,44*	3,72**	2,80
	Hombre	3,01*	3,32**	2,94
Busco la música y/o películas que me gustan en internet y me las descargo…	Mujer	3,48	3,11	3,79
	Hombre	3,32	2,97	3,55
Si me gusta una película busco también el libro, el videojuego, la música, etc.	Mujer	2,83	2,76	2,64
	Hombre	2,65	2,58	2,78
Busco en internet vídeos de las partidas de mis videojuegos preferidos	Mujer	1,80**	1,74**	1,92**
	Hombre	3,82**	3,18**	3,53**
Cuando quiero saber cómo hacer una cosa busco vídeos en internet como tutoriales, etc.	Mujer	3,87*	3,81	4,09
	Hombre	4,16*	3,72	4,20

Descripción: Actividades: 1=nunca y 5=cada día; Afirmaciones: 1=muy en desacuerdo y 5=muy de acuerdo; *p≤ 0,05; **p≤ 0,01; NS/NC: casos perdidos.

4. Discusión

Como se observa en el apartado de resultados, los y las adolescentes hacen un uso intensivo de los medios de comunicación y, en especial, de las redes sociales, destacando el incremento de menores conectados a edades cada vez más tempranas (**Anderson**; **Jiang**, 2018a,b; *Nielsen*, 2017; *Ofcom*, 2019). Esto viene unido a un amplio y generalizado acceso a diferentes medios y dispositivos en el hogar. En el acceso únicamente detectamos diferencias significativas en las tres áreas en el caso de la consola. En los países de Europa y Australia no se encuentran diferencias de género en relación con el resto de dispositivos, al contrario de los países de Sudamérica, donde los chicos tienen más acceso que las chicas al MP3, tablet, ordenador de mesa y cámara de vídeo. Encontramos, de esta manera, respuesta a la H1, que se confirma parcialmente. No se encuentran diferencias de género en el acceso en la mayoría de dispositivos en Europa y Australia, pero sí en Sudamérica. Por lo tanto, la brecha digital de género también es de primer nivel (acceso a la tecnología) (**Correa**, 2010; **Hargittai**; **Walejko**, 2008) según el contexto y en relación a algunos dispositivos (consolas). Esto evidencia la necesidad de seguir explorando las brechas de primer nivel centradas en el acceso, que muchas veces se han considerado superadas.

> La brecha digital de género también es de primer nivel (acceso a la tecnología) según el contexto y en relación a algunos dispositivos (consolas). Esto evidencia la necesidad de seguir explorando las brechas de primer nivel centradas en el acceso, que muchas veces se han considerado superadas

A pesar de ello, donde las diferencias de género son más destacables es en el segundo nivel de la brecha digital, relacionado con los usos, competencias y habilidades (**Van-Deusen**; **Van-Dijk**, 2009), coincidiendo con estudios previos (**Anderson**; **Jiang**, 2018a,b; *Ofcom*, 2019). Es en este nivel donde se encuentran diferencias en las tres áreas estudiadas en relación con el uso de algunos dispositivos y programas. Diferencias sobre todo en el caso de las consolas, ordenador de mesa, y softwares, pero también muy destacables en el de la cámara de fotos y la radio. Se trata de usos ligados a estereotipos que vinculan los hombres a los espacios más técnicos (programación) y las mujeres a los artísticos (escritura). En el caso de las consolas, se observa un estereotipo de género que tiende a vincular a los chicos a lo lúdico y, en especial, a los videojuegos, como ya indicaban investigaciones anteriores (**Cote**, 2018; **Masanet**, 2016; **Hargittai**; **Walejko**, 2008). Sorprenden las diferencias en relación al uso del 'ordenador de mesa', más utilizado por los chicos. Seguramente esto está ligado también al uso de los videojuegos, ya que el ordenador de mesa es uno de los dispositivos secundarios más utilizados para los videojuegos (*AEVI*, 2018). Sorprende, en este sentido, que tanto chicos como chicas tengan acceso a prácticamente los mismos dispositivos (a excepción de los países de Sudamérica) pero que los usos sean tan desiguales.

Focalizándonos en el consumo y producción realizado por parte de los/as adolescentes, observamos que prácticamente todas las actividades relacionadas con el consumo son más realizadas por las chicas. **Resta** *et al.* (2018) ya destacaban diferencias entre consumidores y productores como parte de la brecha de género. Ellas serían las consumidoras. Datos que confirman la H2. La esfera de producción, en cambio, es mas compleja, evidenciando también diferencias de género. Las chicas son las principales productoras de relatos y fotos y los chicos de vídeos para compartir. Se da una situación interesante, parece ser que ellas son las que crean más contenido, pero ellos quienes más comparten, haciendo más evidente su participación online (**Hoffman**; **Lutz**; **Meckel**, 2015). Esto podría estar relacionado con la tendencia de las mujeres a subestimar sus propias habilidades y capacidades digitales (**Robinson** *et al.*, 2015) que les inhiben a la hora de compartir sus creaciones. La H3 queda confirmada en este punto.

En relación al ámbito lúdico, centrado específicamente en los videojuegos, encontramos que sigue siendo mayoritariamente masculino, como ya indicaban investigaciones anteriores (**Hargittai**; **Walejko**, 2008; **Hilbert**, 2011). Este es el punto del estudio donde las diferencias entre chicos y chicas son más notables en las tres áreas geográficas, confirmando de esta manera la H4.

Por su parte, los datos confirman la comunicación sigue estando ligada a las mujeres, que son las principales usuarias de las redes sociales (**Hilbert**, 2011). Esto acentúa el estereotipo que vincula a las mujeres al uso de los medios para las relaciones interpersonales (**Masanet**, 2016). Así se confirma también la H5 y que algunas prácticas históricamente masculinas (videojuegos o uso lúdico del ordenador) siguen vigentes (**Cote**, 2018). En cambio, el consumo y la producción vinculados a lo artístico y expresivo (fotografía, relatos) siguen siendo femeninos. A ellas se les atribuye un uso más nostálgico de dispositivos y una tendencia creativa en el entorno más comunicacional (relaciones sociales). A ellos, una tendencia a dominar las tareas de diseño y programación, la búsqueda de resolución de problemas e intercambio informativo en el ámbito lúdico y técnico (tutoriales).

> Los datos confirman que la comunicación sigue estando ligada a las mujeres, que son las principales usuarias de las redes sociales. Esto acentúa el estereotipo que vincula a las mujeres al uso de los medios para las relaciones interpersonales

Es así como esta investigación sostiene la pervivencia de roles y estereotipos de género en los usos y hábitos de consumo y de producción de los/as adolescentes, datos que evidencian la existencia de una esfera de uso mediático masculino y otra de femenino (**Masanet**, 2016). Y estos usos estereotipados de dispositivos y programas pueden llegar a reflejarse, a posteriori, en los accesos laborales de los/as adolescentes. Se trata de una brecha digital de género que se sustenta endémicamente en los roles que proveen las expectativas sociales y dan forma al uso masculino o femenino de la tecnología. Como indican **Robinson** *et al.* (2015), la conducta es una extensión de los roles sociales, los intereses y las expectativas existentes en la sociedad.

> A ellas se les atribuye un uso más nostálgico de dispositivos y una tendencia creativa en el área más comunicacional (relaciones sociales). A ellos, una tendencia a dominar las tareas de diseño y programación, la búsqueda de resolución de problemas e intercambio informativo

5. Limitaciones y sugerencias para investigaciones futuras

Como se señala en secciones anteriores, este artículo nace de un estudio más amplio que no tenía el objetivo específico de explorar la brecha digital de género en el acceso y hábitos de uso y consumo mediático los/as adolescentes. El estudio buscaba investigar qué hacen los adolescentes con los medios y cómo han aprendido a hacerlo. En este contexto, inevitablemente, emergían cuestiones relacionadas con las diferencias de género en el entorno digital. El cuestionario suponía una oportunidad para entrar en contacto directo con los adolescentes participantes del estudio, recoger datos sociodemográficos y hacer una primera exploración de sus usos y preferencias en relación con los medios (**Scolari**; **Ardèvol**; **Pérez-Latorre**; **Masanet**; **Lugo-Rodríguez**, 2020). Pero no se trataba de la herramienta principal de la investigación, hecho que supone una limitación en este caso, ya que no se pretendía seleccionar una muestra aleatoria (a causa de las limitaciones expuestas en el apartado de selección de la muestra). Además, siendo la primera herramienta metodológica de un estudio etnográfico, cada país administró los cuestionarios que fueron necesarios para poder iniciar las siguientes fases de la investigación. Así, por ejemplo, en el caso de Australia se gestionó un número muy superior de cuestionarios al resto de países para poder acceder a los adolescentes que participarían en las siguientes fases de la investigación. Por su parte, Inglaterra decidió modificar el cuestionario y adaptarlo de manera más exacta a su contexto particular y, por este motivo, quedó fuera del artículo. El resto de países administraron alrededor de 100 cuestionarios, una cifra que no es suficientemente alta como para ser trabajados de manera individual. Estas limitaciones nos han obligado a englobar los cuestionarios en áreas geográficas: países de Europa, Australia y países de Sudamérica. A pesar de ello, las investigadoras somos conscientes de las limitaciones que esto supone, teniendo en cuenta las diferencias culturales y socio-económicas que hay entre países de una misma área como, por ejemplo, entre los de Europa (España, Finlandia, Italia y Portugal) o los de Sudamérica (Colombia y Uruguay).

Teniendo en cuenta todas estas limitaciones, igualmente, el equipo consideró importante publicar los datos específicos del cuestionario sobre 'la brecha digital de género' a modo de estudio exploratorio que abre la puerta y plantea nuevas líneas de investigación. Los datos nos alertan de la pervivencia de diferencias de género entre los hábitos de uso y consumo mediático de los y las adolescentes. De hecho, estos datos preliminares se exploraron de manera cualitativa en las siguientes fases de la investigación. Nuestra sugerencia para trabajos futuros es plantear un análisis cuantitativo que profundice en las cuestiones que este artículo y el posterior análisis cualitativo plantean. Los y las adolescentes se encuentran inmersos en nuevas ecologías mediáticas donde emergen nuevas plataformas y, con ellas, usos y prácticas. A pesar de ello, parece que las diferencias de género no desaparecen. Es por ello que es necesario seguir investigando en esta línea y esto mismo es lo que se plantea en este artículo exploratorio.

6. Conclusiones

La pervivencia de los sesgos de género en los usos y consumos mediáticos conlleva riesgos, ya que puede repercutir en el desarrollo de ciertas capacidades mediáticas y en la inhibición de las mismas por parte de algunos/as adolescentes que no dan valor a sus propias habilidades y capacidades (**Hargittai**; **Shaw**, 2015), o que no quieren ser identificados/as con ellas. Autores como **Hilbert** (2011) o **Rashid** (2016) advierten de la necesidad de superar estas falsas creencias para evitar el agravio comparativo que sí suponen en la realización educativa y laboral de hombres y mujeres.

Según **Ragnedda** (2017), se debe considerar la brecha digital como un problema social y no meramente tecnológico, y centrarse en las desigualdades sociales sobre las que se produce el acceso, uso e influencia de la tecnología. Así, más allá del acceso, el hecho de limitar el uso de las tecnologías según patrones y roles de género da lugar a (y se nutre de) una distribución sesgada de los puestos de trabajo dedicados al diseño o desarrollo digital (**Robinson** *et al.*, 2015). Esto perpetúa (y amplía) la brecha social en la implementación y el desarrollo de las habilidades y los usos digitales.

No se trata sólo de garantizar la igualdad de acceso y confiar en el potencial igualador de internet. Son diversos los autores que niegan este último punto (**Gray** *et al.*, 2017). Si los adolescentes adoptan un rol más activo, hedonista y determinante en programación digital, y las adolescentes un rol pasivo o de simple productor/consumidor de contenidos, la brecha de género se está replicando en los usos.

Los datos nos alertan de la necesidad de dedicar una atención especial a estas desigualdades desde la academia, sociedad, sistema educativo e industria del entretenimiento.

Siguiendo **Gill** *et al.* (2010) y la perspectiva interseccional (**Crenshaw**, 1991), consideramos imprescindible atender aspectos como: (1) la exploración del estado actual del acceso y el uso de dispositivos tecnológicos en la escuela y el hogar de acuerdo con variables interseccionales; (2) un mayor conocimiento de los usos de aprendizaje informal o no-formal que aportan las tecnologías; y (3) la inclusión de la perspectiva de género en la educación digital, buscando gradualmente la eliminación de los sesgos reproducidos en relación con el diseño, programación y producción de contenidos.

> Los datos nos alertan de la necesidad de dedicar una atención especial a las desigualdades desde la academia, la sociedad, el sistema educativo y la industria del entretenimiento

Notas

1. Es importante señalar que se utiliza la palabra ‘acceso’ para hacer referencia a los dispositivos que los/as adolescentes tienen en casa, pero tenerlos en casa no significa que no pueda haber otros límites de acceso a ellos. Este comentario sirve como matización para la interpretación de los datos de ‘acceso’ a los medios y dispositivos.

2. Un coeficiente V de Cramer con valor 0 indica falta de asociación estadística y 1 indica asociación perfecta. Si bien las interpretaciones no son unívocas, en general un coeficiente V mayor a 0,3 se interpreta como una asociación significativa y un resultado entre 0,6 y 1 indica una asociación fuerte.

5. Referencias

AEVI (2018). *La industria del videojuego. Anuario 2018 de la Asociación Española de Videojuegos*.
http://www.aevi.org.es/web/wp-content/uploads/2019/05/AEVI_Anuario_2018.pdf

Anderson, Monica; **Jiang, Jingjing** (2018). *Teens, social media habits & experiences.* Washington, *Pew Research Center*. November, 28.
https://www.pewresearch.org/internet/2018/11/28/teens-social-media-habits-experiences-2018

Ardèvol, Elisenda (2017). *Kit for field researchers*. Transmedia literacy project report, Barcelona.
https://repositori.upf.edu/handle/10230/33909

Barrantes-Cáceres, Roxana; **Cozzubo-Chaparro, Angelo** (2017). “Age for learning, age for teaching: the role of inter-generational, intra-household learning in Internet use by older adults in Latin America”. *Information, communication & society*, v. 22, n. 2, pp. 250-266.
https://doi.org/10.1080/1369118X.2017.1371785

Brunton, Colmar (2015). *Children’s media use study: How our children engage with media today*.
https://www.bsa.govt.nz/oldsite/assets/Research/Childrens_Media_Report_2015_FINAL_for_publishing_2.pdf

Cañón-Rodríguez, Ruth; **Grande-del-Prado, Mario**; **Cantón-Mayo, Isabel** (2016). “Brecha digital: impacto en el desarrollo social y personal. Factores asociados”. *Tendencias pedagógicas*, n. 28, pp. 115-132.
https://doi.org/10.15366/tp2016.28.009

Calderón-Gómez, Daniel (2019). “Technological capital and digital divide among young people: an intersectional approach”. *Journal of youth studies*, v. 22, n. 7, pp. 941-958.
https://doi.org/10.1080/13676261.2018.1559283

Cooper, Joel (2006). “The digital divide: The special case of gender”. *Journal of computer assisted learning*, v. 22, n. 5, pp. 320-334.
https://doi.org/10.1111/j.1365-2729.2006.00185.x

Correa, Teresa (2010). “The participation divide among ‘online experts’: Experience, skills and psychological factors as predictors of college students’ web content creation”. *Journal of computer-mediated communication*, v. 16, n. 1, pp. 71-92.
https://doi.org/10.1111/j.1083-6101.2010.01532.x

Cote, Amanda C. (2018). “Writing ‘gamers’: The gendered construction of gamer identity in Nintendo Power (1994-1999)”. *Games and culture*, v. 13, n. 5, pp. 479-503.
https://doi.org/10.1177/1555412015624742

Crenshaw, Kimberlé W. (1991). “Mapping the margins: Intersectionality, identity politics, and violence against women of color”. *Stanford law review*, v. 43, n. 6, pp. 1241-1299.
https://doi.org/10.2307/1229039

Dixon, Laura J.; **Correa, Teresa**; **Straubhaar, Joseph**; **Covarrubias, Laura**; **Graber, Dean**; **Spence, Jeremiah**; **Rojas, Viviana** (2014). “Gendered space: The digital divide between male and female users in internet public acces sites”. *Journal of computer-mediated communication*, v. 19, n. 4, pp. 991-1009.
https://doi.org/10.1111/jcc4.12088

Dolan, Jennifer E. (2016). "Splicing the divide: A review of research on the evolving digital divide among K-12 students". *Journal of research on technology in education*, v. 48, n. 1, pp. 16-37.
https://doi.org/10.1080/15391523.2015.1103147

Dueñas-Cid, David; **Pontón-Merino, Paloma**; **Belzunegui-Eraso, Ángel**; **Pastor-Gosálbez, Inma** (2016). "Expresiones discriminatorias, jóvenes y redes sociales: la influencia del género". *Comunicar*, v. 46, n. XXIV, pp. 67-76.
https://doi.org/10.3916/C46-2016-07

García-Martín, Sheila; **Cantón-Mayo, Isabel** (2019). "Uso de tecnologías y rendimiento académico en estudiantes adolescentes". *Comunicar*, v. 59, n. XXVII, pp. 73-81.
https://doi.org/10.3916/C59-2019-07

Gray, Tricia J.; **Gainous, Jason**; **Wagner, Kevin M.** (2016). "Gender and the digital divide in Latin America". *Social science quarterly*, v. 98, n. 1, pp. 326-340.
https://doi.org/10.1111/ssqu.12270

Hargittai, Eszter; **Shaw, Aaron** (2015). "Mind the skills gap: The role of Internet know-how and gender in differentiated contributions to *Wikipedia*". *Information, communication and society*, v. 18, n. 4, pp. 424-442.
https://doi.org/10.1080/1369118X.2014.957711

Hargittai, Eszter; **Walejko, Gina** (2008). "The participation divide: Content creation and sharing in the digital age". *Information, communication & society*, v. 11, n. 2, pp. 239-256.
https://doi.org/10.1080/13691180801946150

Hilbert, Martin (2011). "Digital gender divide or technologically empowered women in developing countries? A typical case of lies, damned lies, and statistics". *Women's studies international forum*, v. 34, n. 6, pp. 479-489.
https://doi.org/10.1016/j.wsif.2011.07.001

Hoffmann, Christian-Pieter; **Lutz, Christoph**; **Meckel, Miriam** (2015). "Content creation on the Internet: a social cognitive perspective on the participation divide". *Information, communication & society*, v. 18, n. 6, pp. 696-716.
https://doi.org/0.1080/1369118X.2014.991343

Joiner, Richard; **Stewart, Caroline**; **Beaney, Chelsey** (2015). "Gender digital divide. Does it exist and what are the explanations?". In: Rosen, Larry D.; Cheever, Nancy A.; Carrier, L. Mark (eds.). *The Wiley handbook of psychology, technology and society* (pp. 74-88). First edition, John Wiley & Sons, LTD Published. ISBN: 978 1 118772027

Martínez-Cantos, José-Luis (2017). "Digital skills gaps: A pending subject for gender digital inclusion in the European Union". *European journal of communication*, v. 32, n. 5, pp. 419-438.
https://doi.org/10.1177/0267323117718464

Masanet, Maria-Jose (2016). "Pervivencia de los estereotipos de género en los hábitos de consumo mediático de los adolescentes: drama para las chicas y humor para los chicos". *Cuadernos.Info*, n. 39, pp. 39-53.
https://doi.org/10.7764/cdi.39.1027

Nielsen (2017). *Mobile kids: The parent, the child and the smartphone*. New York: A. C. Nielsen, LLC. ISBN: 978 1 789730364

Monks, Helen; **Barnes, Amy**; **Cross, Donna**; **McKee, Heather** (2019). "A qualitative exploration of electronic image sharing among young people: Navigating the issues of conformity, trust, intention and reputation". *Health education & behavior*, v. 46, n. 25, pp. 1065-1135.
https://doi.org/10.1177/1090198119873921

Ofcom (2020). *Children and parents: Media use and attitudes report* 2019, UK.
https://www.ofcom.org.uk/__data/assets/pdf_file/0023/190616/children-media-use-attitudes-2019-report.pdf

Pink, Sarah; **Morgan, Jennie** (2013). "Short-term ethnography: Intense routes to knowing". *Symbolic interaction*, v. 36, n. 3, pp. 351-361.
https://doi.org/10.1002/symb.66

Ragnedda, Massimo (2017). *The third digital divide. A Weberian approach to digital inequalities.* London, New York: Routledge. ISBN: 978 1 472471260

Rashid, Ahmed-Tareq (2016). "Digital inclusion and social inequality: Gender differences in ICT access and use in five developing countries". *Gender, technology and development*, v. 20, n. 3, pp. 306-332.
https://doi.org/10.1177/0971852416660651

Resta, Paul; **Laferrière, Thérèse**; **McLaughlin, Robert**; **Kouraogo, Assetou** (2018). "Issues and challenges related to digital equity: An overview". In: J. Voogt *et al.* (eds.). *Second handbook of information technology in primary and secondary education*, Springer International Handbooks of Education.
https://doi.org/10.1007/978-3-319-71054-9_67

Robinson, Laura; **Cotten, Sheila R.**; **Ono, Hiroshi**; **Quan-Haase, Anabel**; **Mesch, Gustavo**; **Chen, Wenhong**; **Schulz, Jeremy**; **Hale, Timothy M.**; **Stern, Michael J.** (2015) "Digital inequalities and why they matter", *Information, communication & society*, v. 18, n. 5, pp. 569-582.
https://doi.org/10.1080/1369118X.2015.1012532

Schradie, Jen (2011). "The digital production gap: The digital divide and Web 2.0 collide". *Poetics*, v. 39, n. 2, pp. 145-168.
https://doi.org/10.1016/j.poetic.2011.02.003

Scolari, Carlos A.; **Ardèvol, Elisenda**; **Pérez-Latorre, Òliver**; **Masanet, Maria-Jose**; **Lugo-Rodríguez, Nohemi** (2020). "What are teens doing with media? An ethnographic approach for identifying transmedia skills and informal learning strategies". *Digital education review*, n. 37, pp. 269-287.
https://doi.org/10.1344/der.2020.37.269-287

Scolari, Carlos A.; **Masanet, Maria-Jose**; **Guerrero-Pico, Mar**; **Establés, María-José** (2018). "Transmedia literacy in the new media ecology: Teens' transmedia skills and informal learning strategies". *El profesional de la información*, v. 27, n. 4, pp. 801-812.
https://doi.org/10.3145/epi.2018.jul.09

Smahel, David; **MacHackova, Hana**; **Mascheroni, Giovanna**; **Dedkova, Lenka**; **Staksrud, Elizabeth**; **Ólafsson, Kjartan**; **Livingstone, Sonia**; **Hasebrink, Uwe** (2020). *EU kids online 2020: Survey results from 19 countries.* Project affiliated to The London School of Economics and Political Science, Lab Irtis.
https://doi.org/10.21953/lse.47fdeqj01ofo

Starkey, Louise; **Eppel, Elizabeth A.**; **Sylvester, Allan** (2018) "How do 10-year-old New Zealanders participate in a digital world?" *Information, communication & society*, v. 22, n. 13, pp. 1929-1944.
https://doi.org/10.1080/1369118X.2018.1472795

Van-Deursen, Alexander J. A. M.; **Van-Dijk, Jan A. G. M.** (2009). "Improving digital skills for the use of online public information and services". *Government information quarterly*, v. 26, n. 2, pp. 333-340.
https://doi.org/10.1016/j.giq.2008.11.002

Competências e habilidades digitais requeridas aos profissionais da informação nos anúncios brasileiros de emprego na web

Digital competences and abilities required from information professionals in Brazilian online job ads

Francisco-Carlos Paletta; Juan-Antonio Pastor-Sánchez; José-Antonio Moreiro-González

Cómo citar este artículo:

Paletta, Francisco-Carlos; **Pastor-Sánchez, Juan-Antonio**; **Moreiro-González, José-Antonio** (2021). "Competências e habilidades digitais requeridas aos profissionais da informação nos anúncios brasileiros de emprego na web". *Profesional de la información*, v. 30, n. 1, e300108.

https://doi.org/10.3145/epi.2021.ene.08

Artículo recibido el 01-05-2020
Aceptación definitiva: 18-09-2020

Francisco-Carlos Paletta ✉
https://orcid.org/0000-0002-4112-5198

Universidad Carlos III de Madrid
Dpto. de Biblioteconomía y Documentación
100419319@alumnos.uc3m.es

Universidade de São Paulo
Departamento de Informação e Cultura
fcpaletta@usp.br

Juan-Antonio Pastor-Sánchez
https://orcid.org/0000-0002-1677-1059

Universidad de Murcia
Facultad de Comunicación y Documentación
Campus Universitario
30100 Espinardo (Murcia), España
pastor@um.es

José-Antonio Moreiro-González
https://orcid.org/0000-0002-8827-158X

Universidad Carlos III de Madrid
Departamento de Biblioteconomía y Documentación
Madrid, 126
28903 Getafe (Madrid), España
jamore@bib.uc3m.es

Resumo

São analisados os anúncios de emprego através da web para identificar a competência digital que as empresas e organizações estão solicitando aos profissionais de informação. A informação é obtida através da análise do conteúdo dos anúncios de oportunidade de emprego na web. A sua recuperação da web é terminológica e a seleção final é feita por especialistas sempre que apresentam conhecimentos, atividades ou requisitos relacionados com a Ciência da Informação e a transformação digital. Depois de padronizar o formato, os anúncios são contrastados com uma taxonomia elaborada *ad hoc*, a fim de categorizá-los. Taxonomia e corpus de anúncios são comparados a partir de arquivos XML automatizados em *Apache Solr*. Desde a taxonomia se lançam as consultas ao texto dos anúncios. Os dados obtidos se armazenam como conjuntos em formato CSV desde os quais se geram os grupos de conhecimentos gerais e específicos. Os resultados são apresentados, primeiro, por classes de conhecimentos e por perfis profissionais, centrando a atenção nos relacionados com a transformação digital. Se explicam os ramos de atividade das empresas que convocam as vagas, ao tempo que os conhecimentos transversais de informática. Em seguida se apresentam e interpretam os conhecimentos específicos do âmbito digital, agrupados nas facetas mais determinantes: objetos digitais, bancos de dados, serviços digitais, análise de dados, bancos de conhecimentos e inteligência artificial, software, sistemas de organização do conhecimento (SOC), direitos e valores, web e portais. Distinguem-se pelo escopo da sua frequência e pelas mudanças que implicam nas atividades profissionais. Conclui-se considerando o surgimento de perfis bem distantes das denominações e atividades tradicionais, bem como as mudanças que a transformação digital apresenta em um cenário altamente complexo para o mercado de trabalho e o desenvolvimento de competências digitais.

Palavras-chave

Biblioteconomia; Ciência da informação; Documentação; Especialidades; Habilidades; Competências; Conhecimentos; Currículos acadêmicos; Bibliotecários; Documentalistas; Mercado laboral; Ofertas; Anúncios de emprego; Demandas de trabalho; Oportunidades; Vagas; Análise de conteúdo; Transformação digital; TIC; Profissionais da informação; Competências digitais; Perfis; Complexidade do mercado de trabalho global.

Abstract

We analyze online job ads to identify the digital competences that companies and organizations demand from information professionals. This information is obtained from a content analysis of online job ads. Their retrieval from the web is terminological, and specialists select ads that include knowledge, activities, or requirements related to information science and digital transformation. After the ad format is standardized, the ads are analyzed using an ad hoc taxonomy for categorization. The taxonomy and the corpus of the ads are compared using automatized XML files in *Apache Solr*. Based on the taxonomy, we approach the text of the ads. The obtained data are stored as CSV files, from which we generate the general and specific groups of knowledge. The results are displayed according to classes of knowledge and professional profiles, focusing on those that relate to digital transformation. We explain the activity branches and the transversal informatics knowledge of the companies offering the positions. The specific knowledge in the digital environment is then presented, interpreted, and grouped according to the ads' most characteristic facets: digital objects, data banks; digital services; data analysis; knowledge banks and artificial intelligence; software; knowledge organization systems (KSO); rights and values; and web and portals. These facets are distinguished by their frequency and by the transformations they generate in professional activities. We conclude by considering the appearance of profiles that are quite removed from traditional denominations and activities, as well as considering the effects of digital transformation in a highly complex labor market and on the development of digital competences.

Keywords

Librarianship; Information science; Specialties; Knowledges; Librarians; Information scientists; Profiles; Working market; Offers; Job demands; Job ads; Opportunities; Content analysis; Digital transformation; ICT; Information professionals; Digital skills; Complexity of the global labor market.

Financiamento

Projeto de pesquisa com apoio *Fapesp* (*Fundação de Amparo à Pesquisa do Estado de São Paulo*, Brasil). Processo 2019/01128-7 e 2019/02595-8.

1. Introdução

O principal objetivo do projeto de pesquisa é contribuir para o entendimento de como a transformação digital afeta pesquisadores, professores e profissionais da informação considerando a complexidade do mercado de trabalho no cenário atual. Inicialmente, foi analisado o envolvimento do digital na pesquisa brasileira em Biblioteconomia e Ciência da Informação, bem como os efeitos que teve sobre a profissão, a partir da identificação das atividades atribuídas e os conhecimentos e competências demandados pelos concursos públicos no Brasil. Aborda-se agora a presença de requisitos digitais para o mercado de trabalho no setor público e privado. Se pretende explorar as habilidades e conhecimentos solicitados por organizações, empresas e entidades por meio de anúncios de emprego na internet, considerando o impacto da transformação digital em todos os setores da economia (**Vial**, 2019). A facilidade com que os usuários podem se comunicar diretamente com os recursos disponíveis tem sido uma das fontes de mudança no perfil do profissional da informação uma vez que em passado ressente os vários objetos de informação eram armazenados em espaços específicos de processamento e consulta, agora eles estão em uma nuvem sem limitação espaço-temporal. Assim, a natureza digital dos objetos e o seu intercâmbio através da internet abriu um marco de ação dinâmica e em tempo real fator que afetou de forma intensa as profissões da Informação. Muitas das tarefas técnicas foram revistas, algumas foram abandonadas e outras novas aparecem como demandas da era digital.

A complexidade do mercado de trabalho global impõe ao profissional da informação competências e conhecimentos transdisciplinares e atuação a partir de uma mistura de áreas e habilidades, tanto no que diz respeito à formação de origem como aos numerosos espaços de aplicação profissional (**Kennan** *et al.*, 2006). Para atender às demandas da sociedade da informação na era digital, os profissionais têm se posicionado em um cenário laboral complexo e dinâmico desafiado pela administração e gestão, e o uso intenso das tecnologias da informação e comunicações -TIC (**Belluzo**, 2011). As TIC têm evoluído de forma escalável, com ciclos de mudança cada vez mais curtos e que tornam mais rápida a transformação digital no mundo contemporâneo. Isto leva-nos a olhar primeiro para onde vai a prática e, consequentemente, para a formação em

A complexidade do mercado de trabalho global impõe ao profissional da informação competências e conhecimentos transdisciplinares e atuação a partir de uma mistura de áreas e habilidades

Ciência da Informação, uma vez que o mercado de trabalho está continuamente a reconfigurar o ensino superior (**Moreiro**, 2018). Sem dúvida, é conveniente a reflexão sobre que formação permite aos futuros profissionais da informação atuar em um ambiente de trabalho altamente conectado às redes de dados e a produção de conhecimento coletivo e compartilhado em tempo real. Neste contexto orna-se de fundamental importância entender as demandas do mercado de trabalho por competências digitais dos profissionais da informação que irão impactar nos programas e currículos de formação profissional (**Lima** *et al.*, 2017).

Nosso foco são os profissionais que, além de trabalharem em unidades autônomas de informação, desenvolvem seus serviços em empresas e organizações com presença digital em seus procedimentos, conhecimento e gestão. Isto inclui qualquer sector de atividade, uma vez que todos eles estão focados na gestão digital da informação. Isso foi demonstrado por autores brasileiros, como **Bahia** (2018); **Reyes** *et al.*, (2017); **Paletta** e **Milanesi** (2016); **Vieira** (2009); **Tomaél** e **Alvarenga** (2000). Tal é a transcendência que as TIC e o cenário digital estão mudando as estruturas teóricas e o mercado de trabalho (**Tam**; **Robertson**, 2002). Portanto, há um acompanhamento atento de suas tendências, bem como da evolução do perfil profissional, o que muitas vezes é feito a partir da análise das ofertas de emprego (**Croneis**; **Henderson**, 2002). Serve ainda para adiantar-se a sua evolução e determinar o desenvolvimento e o redesenho curricular nos estudos universitários em Ciência da Informação. Embora, sem dúvida, as descrições das vagas ofertadas reflitam o que instituições e empresas estão procurando, interessadas em atrair profissionais qualificados para poder lidar com os desafios do mercado de trabalho na era digital.

Para que os anúncios de ofertas de emprego sirvam para analisar a situação do mercado de trabalho é necessário utilizar fontes que sejam consistentes com a realidade das ocupações (**Harper**, 2012). Além disso, os avisos garantem a expressão direta das necessidades. Assim, continuaram-se a imprimir muito além do ano 2000 (**Gold**; **Grotti**, 2013) e então, já em formato digital, não perderam sua condição própria para atrair profissionais (**Applegate**, 2010). Não se trata de aceder-lhes diretamente nas instituições, com buscas demoradas e complicadas. Se não de obter os dados mais representativos a partir da confiabilidade e garantia oferecidas pelos portais de emprego, onde empresas, instituições e sistemas de informação expõem suas necessidades e exigências (**Shahbazi**; **Hedayati**, 2016).

O interesse em analisar as condições do mercado de trabalho não só serve para verificar a adequação dos currículos às exigências da sociedade, mas também para incentivar a atualização desde os conselhos profissionais, as empresas e mesmo desde o próprio incentivo dos profissionais, a par de conhecer a situação do emprego em todos os aspectos envolvidos e poder garantir uma formação profissional alinhada com os desafios e demandas da sociedade moderna.

1.1. Objetivos

O objetivo é identificar a evolução dos requisitos que, para as atividades digitais, empresas e organizações estão propondo aos profissionais da informação.

- Procurar, selecionar e extrair informação terminológica das ofertas de emprego para profissionais brasileiros de Biblioteconomia e Ciência da Informação que tenham aparecido na web e estejam relacionadas ao ambiente digital.
- Tipificar e organizar o vocabulário obtido por categorias de conhecimentos e competências requeridos.
- Identificar as competências, habilidades e perfis profissionais solicitados pelas novas demandas impostas pela transformação digital e interpretar os requisitos indicados nas ofertas de trabalho.

Na era digital, a mineração de dados é uma ferramenta eficiente para a análise das ofertas de emprego na web com foco na identificação de competências e habilidades do profissional da informação frente a complexidade do mercado de trabalho global. Contribui ainda de forma sistêmica para a modernização e inovações dos currículos acadêmicos de formação profissional (**Kim** *et al.*, 2013). Auxilia em identificar qualitativamente os conhecimentos solicitados aos bibliotecários nos anúncios (**Orme**, 2008).

Na última década, as ofertas de emprego são cada vez mais utilizadas para analisar o mercado de trabalho. A informação é geralmente obtida utilizando ferramentas de análise textual e de conteúdo (**Hong**, 2016). Em seguida, a partir de critérios estatísticos, categorizar os dados obtidos (**Kim**; **Angnakoon**, 2016). Dentro destas diretrizes estão posicionados os trabalhos de **Herzberg** (2010) na Alemanha; no Reino Unido os de **Cox** e **Corrall** (2013) e **Harper** (2013), este focado na avaliação do currículo; nos Estados Unidos os de **Nielsen** (2013), **Detmering** e **Sproles** (2012), **Okamoto** e **Polger** (2012), **Tzoc** e **Millard** (2011) e **Gerolimos** *et al.* (2015); ou **Tejada**, **Chacón** e **Moreiro** (2014) na Espanha. De abrangência internacional é a pesquisa de **Rebmann**, **Molitor** e **Rainey** (2012).

2. Metodologia

A análise de anúncios de emprego se constata como um método adequado para estudar o mercado de trabalho e sua evolução. Os anúncios são uma fonte confiável, conectada com a realidade e demandas do seu momento, e útil para conhecer a atividade e atuação profissional no mercado de trabalho (**Dutra**; **Carvalho**, 2006).

Em um momento caraterizado por uma intensa transformação que repercute nas profissões associadas à gestão e organização da informação, as ofertas de emprego contêm informação valiosa para fazer mineração de dados. Trata-se de explorar a situação do emprego em todos os aspectos envolvidos no cenário digital, sem esquecer suas caraterísticas gerais e as condições socioeconómicas e espaço-temporais.

A observação dos anúncios de emprego na web oferece ao pesquisador a vantagem de coletar informações relevantes, sem depender da predisposição e objetividade das pessoas, como acontece quando se utilizam questionários ou entrevistas como método de pesquisa. Também facilita a consulta uma vez que apresenta acessibilidade imediata, pois não é preciso recorrer a nenhum serviço para procurar a informação. A capacidade difusora dos portais especializados se amplifica pela sua novidade e atualidade. Seus conteúdos vêm potenciadas pela repercussão imediata nas redes sociais. No entanto, requer uma dedicação intensa e tempo suficiente para selecionar uma amostra consoante com a conveniência de seu conteúdo e estudá-lo posteriormente (**Kim**; **Angnakoon**, 2016).

A análise de conteúdo fornece uma metodologia compreensiva das pesquisas de caráter social (**Guerra**, 2006), pelo que orienta aqui o percurso seguido até o esclarecimento dos indícios que manifestam os anúncios de oferta de emprego. Sua lógica se dispõe em duas etapas:

- A primeira consiste na exploração da série de ofertas escolhidas utilizando ferramentas de análise textual e de conteúdo para identificar as palavras, sintagmas e declarações do corpus de anúncios
- A segunda, sistematizar os dados obtidos (**Freitas**; **Janisek**, 2000), o que permite logo proceder a sua elucidação inferida (**Holsti**, 1969).

Este encadeamento perde seu proposito quando não se recopila uma amostra de anúncios suficiente e representativa. A exploração está alinhada com outros estudos em áreas de trabalho semelhantes e continua pesquisas precedentes sobre o mercado de trabalho e a formação profissional no Brasil. Para fazê-lo, o "Portal Catho" foi a referência selecionada inicialmente por ser a plataforma de vagas de emprego que veicula o maior número de anúncios e que já fornecera os dados para trabalhos publicados em 2006 (**Dutra** e **Carvalho**), em 2009 (**Vieira**), além do promovido em 2011 pela *Fapesp* (**Moreiro**; **Vergueiro**; **Sánchez-Cuadrado**, 2012); (**Moreiro**; **Vergueiro**, 2012) e os de **Bahia** (2018; 2019) em referência ao setor arquivístico.

A coleta de dados se faz também no *Portal do Bibliotecário* e no *LinkedIn*, que recolhem informações de outras plataformas, do mesmo modo que com aportes de *Infojobs*; *buscojobs.com.br*; *ProcurandoEmprego*; *curriculum.com.br*; *INFOhome*; *Teletime*; *Conselho Regional de Biblioteconomia 8ª Região* (*CRB-8ª*); *vagas.com* e *Google vagas*. As ofertas para estagiários não se selecionam pela interinidade e temporalidade das suas atividades, mas também pela escassa e indeterminada descrição das atividades a desenvolver. Na progressão metodológica a pesquisa foi implementada nas etapas descritas a seguir.

2.1. Busca, acesso, recuperação e apropriação da informação

Realizada desde as denominações dos profissionais identificadas no projeto *Fapesp* 2011 (**Moreiro**; **Vergueiro**, 2012). Sem deixar de procurar também por alguma das tarefas executadas, entre as que deram resposta positiva na recuperação: digitalização, arquitetura da Informação, web design e inteligência competitiva. Se selecionam por especialidades os anúncios que descrevem atividades e conhecimentos relacionados à transformação digital ou que incluem entre os seus requisitos qualquer graduação em Ciência da Informação. A compilação se realiza desde 02/06/2019 até

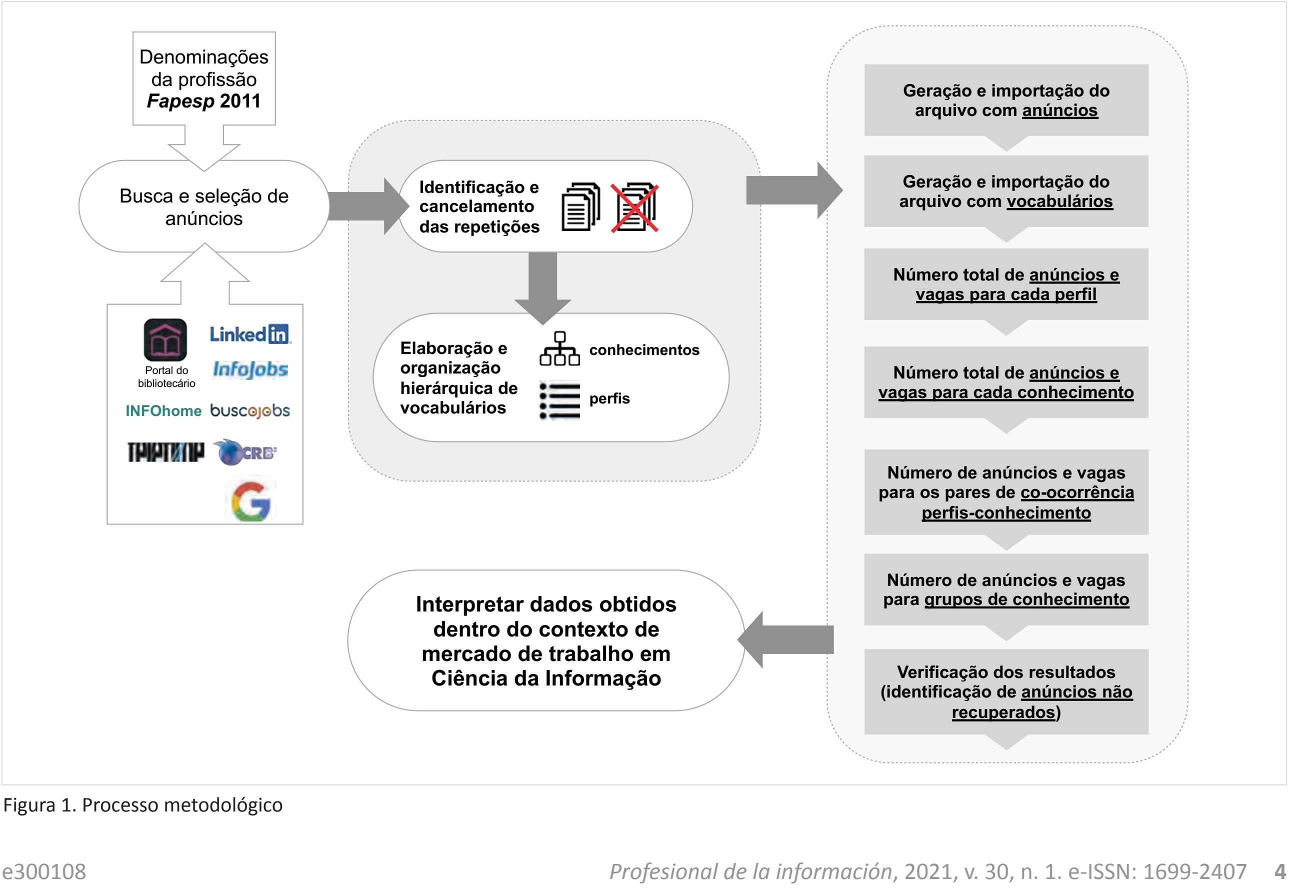


Figura 1. Processo metodológico

22/10/2019. Os anúncios recolhidos fornecem abundantes dados para fazer uma mineração qualitativa e quantitativa com respeito aos objetivos procurados (**Barion**; **Lago**, 2008).

2.2. Identificação e cancelamento das repetições do mesmo anúncio de emprego

A alta percentagem das repetições que não são selecionados supõe uma dedicação intensa, pois requer uma consulta minuciosa até identificar as razoes da tomada de decisão. As diferentes fontes são unidas em um único arquivo no qual é realizado uma padronização básica de formato para identificar o nome do perfil e eliminar espaços duplicados, quebras de linha e elementos de formatação visual.

2.3. Elaboração de uma estrutura hierárquica com o vocabulário extraído

A razão para categorizar provem do tamanho do listado de termos, junto com argumentos derivados da própria estrutura dos anúncios. Uma estrutura hierárquica plana serve de matriz para efetuar a extração automática de termos e enunciados das ofertas de emprego (**Paletta**; **Moreiro**, 2019).

A estrutura fez-se a partir do vocabulário obtido no projeto de 2011, ao redor dos macro-termos que categorizam os conhecimentos próprios dos profissionais no ambiente digital (*ISO/TR 28118*, 2009; **Poll**, 2001; **Rosseto**, 2008; **Sayão**; **Marcondes**, 2008), que se expressam na tabela 1.

Tabela 1. Categorias dos conhecimentos específicos

Classes
Coleções digitais
Serviços digitais
Gestão dos serviços de informação (GSI)
TIC
Software
Organização e representação do conhecimento (ORC)
Direitos e valores
Educação e treinamento (EDU-TRE)
Conhecimentos transversais de informática (CTI)

2.4. Processamento da informação coletada

O processamento das informações coletadas se deu em etapas, pois os anúncios carecem de padronização estrutural e de conteúdo para poder aplicar diretamente as técnicas de recuperação de dados. Estes problemas refletem-se na localização dos conhecimentos necessários em partes diferentes dos anúncios, bem como na ausência de controle terminológico. Ao que também contribui o uso de fontes diversas e até mesmo a heterogeneidade na nomenclatura dos perfis das ofertas de trabalho. Para superar esta irregularidade, se faz uma categorização automática a partir do vocabulário matriz com técnicas de recuperação de informação. *Apache Solr* atua como motor de recuperação da informação: *https://lucene.apache.org/solr*

Enquanto algumas propostas de classificação das ofertas de emprego recorrem à aprendizagem automática baseada no uso de máquinas vetoriais (**Javed** *et al.*, 2015), preferimos aplicar algoritmos de classificação que constroem automaticamente consultas a serem executadas no *Apache Solr* (**Hirsch** *et al.*, 2007; **Sood** *et al.*, 2007; **Cai** *et al.*, 2016). Se desenvolve um programa escrito em linguagem *Python* para pré-processar o texto dos anúncios, assim como para interagir com o *Apache Solr* durante a execução das consultas correspondentes e para elaborar com os resultados os conjuntos de dados.

2.4.1. Geração de arquivo XML

É gerado um arquivo XML para importar cada um dos anúncios como documentos separados na coleção do *Apache Solr*. Ao mesmo tempo que se aplica um arquivo de mapeamento de perfil para padronizar os diferentes nomes de vagas muito semelhantes. Assim, cada anúncio aparece com o nome original e o nome padronizado. O número de empregos oferecidos em cada anúncio também é identificado. Quando estes dados não foram explicitamente refletidos, assume-se que o anúncio oferece apenas um emprego.

2.4.2. Importação de arquivo XML com a terminologia do vocabulário matriz

Para todos os seus elementos são criados documentos individuais numa colecção específica (diferente da colecção de anúncios) do *Apache Solr*.

2.4.3. Elaboração de conjunto de dados

A partir do mapeamento dos perfis se elabora um conjunto de dados CSV referentes ao número total de anúncios e vagas para cada perfil padronizado.

2.4.4. Operador *Fuzzy Search*

Desde os termos do vocabulário se fazem as consultas construídas com o operador *Fuzzy Search* sobre o texto dos anúncios, excluindo o nome dos perfis para aumentar a precisão das buscas. A partir dos documentos recuperados em cada consulta se obtém o número total de anúncios e vagas oferecidas para cada conhecimento do vocabulário. As informações são armazenadas como conjuntos de dados CSV.

2.4.5. Cruzamento dos dados

Ao cruzar os dados obtidos nos passos 2.4.3 e 2.4.4, são gerados dois conjuntos com a informação de pares de co-ocorrência entre perfis e conhecimentos, tanto do número de anúncios como do número de vagas oferecidas (**Salton**, 1970). Para conseguir uma validação mais eficiente dos resultados, são eliminadas as referências a conhecimentos que aparecem sem co-ocorrência com qualquer um dos perfis identificados.

2.4.6. Cálculo dos grupos de conhecimentos

A partir de uma série de termos genéricos (bibliotecas digitais, internet, web, dados, redes, conteúdos e busca) são gerados os clusters de conhecimentos correspondentes em relação ao número de anúncios e de vagas oferecidas (**Kim**; **Angnakoon**, 2016).

2.4.7. Verificação dos resultados

Como método de verificação dos resultados, são identificados os anúncios que não foram recuperados na etapa 2.4.4. O objetivo é evitar a perda de conhecimentos presentes nos anúncios, mas que não estavam incluídos no vocabulário matricial.

2.5. Interpretação dos dados coletados

A segunda etapa busca interpretar a realidade à qual pertencem os dados obtidos dentro do contexto de comportamento das ofertas de mercado de trabalho em Ciência da Informação (**Hong**, 2016). Esta interpretação procura contribuir para debates sobre os pilares das atividades, conhecimentos e competências das profissões da informação no contexto tecnológico-digital e acresce a percepção das capacidades que os profissionais precisam cultivar para desenvolver-se bem.

3. Visão geral dos resultados

Dos 658 termos incluídos na estrutura hierárquica matriz, 372 não obtêm resposta no corpus analisado, frente aos 286 termos com retorno. Esse 56,53% dos termos sem recuperação nos anúncios indicam que, tanto na profundidade como no modelo de representação, a cobertura atendida pela matriz terminológica atende aos objetivos desta pesquisa. No entanto, o elevado número de ocorrências de muitos dos 286 termos justifica a abertura de todas as opções possíveis. Também influi que sinônimos e quase-sinônimos tenham sido incluídos na matriz para recuperar conhecimentos que são expressos em linguagem livre. Sem esquecer que a aparição de um termo não exclui a possibilidade de que um sinônimo esteja presente no mesmo anúncio. Assim como que os anúncios utilizam mais hiperônimos do que hipônimos na hora de denominar os conhecimentos.

Tabela 2. Conhecimentos por categorias

Classes	TC	TSR	%	NC	NE
Coleções digitais	100	54	54,0	508	3 de nível 4
Serviços digitais	54	35	64,8	145	1 de nível 4
GSI	97	65	67,0	371	0 de nível 4
TIC	151	64	42,3	576	11 de nível 4
Software	59	28	47,4	265	0 de nível 4
ORC	82	55	67,0	99	0 de nível 4
Direitos e valores	54	35	64,8	96	0 de nível 4
EDU-TRE	37	29	78,3	105	0 de nível 4
CTI	24	7	29,0	196	7 de nível 4
Total	658	372	56,5	2361	22 de nível 4

Legenda:
TC: Termos da categoria
TSR: Termos da matriz sem resposta no corpus de anúncios
%: Percentagem da resposta em relação ao total de termos da sua classe
NC: Número de vezes que os conhecimentos aparecem nas vagas anunciadas
NE: Nível de especificação de 0 a 4, número de conhecimentos que alcançam a maior profundidade na especificação.

As classes TIC e CTI mostram que quanto maior o nível de especificidade dos termos na descrição, maior a percentagem de respostas na pesquisa. Embora a classe Software apareça independente de seu lugar natural, o grupo TIC, para evitar o incremento excessivo do número de termos. O desenvolvimento da classe educação, capacitação e treinamento inclui o maior número de termos sem resposta, mesmo quando as vagas de bibliotecário se oferecem em grande parte para centros de ensino com funções laborais genéricas em Educação e Formação. A ausência nesta classe de conhecimentos relativos ao cenário digital mostra uma atuação costumeira e fácil de predizer.

Tabela 3. Anúncios e vagas por perfil genérico

Denominação genérica	Anúncios		Vagas	
	N	%	N	%
Arquivista	70	27,45	101	29,61
Bibliotecário-documentalista	102	40,00	151	44,28
Cientista da informação	83	32,54	89	26,09
Total	255	99,99	341	99,98

As denominações de vagas se agrupam em três perfis principais segundo a similaridade dos conhecimentos solicitados e pela proximidade das atividades a desenvolver. Nas 19 denominações incluídas na categoria de arquivista ouve que estabelecer equivalências, obrigados pela excessiva dispersão do nomeado das vagas. O mesmo acontece nas outras denominações. As 101 vagas dos arquivistas são chamadas nos anúncios com uma ampla variedade de nomes. A mais da denominação padrão de arquivista aparecem os de administrador de arquivo empresarial, arquivista e bibliotecário, analista de arquivo, especialista em organização de documentos e supervisor de arquivo. O técnico de arquivo é, da mesma forma, técnico arquivista. Outro tanto sucede com as vagas de digitalizador que se publicam como operador de digitalização e operador de scanner/digitalização. Já os técnicos de preservação digital se especificam em auxiliar e assistente de preservação. As atividades de digitalização e preservação são as mais relacionadas com a transformação digital, mesmo que de um modo muito mecânico. A recuperação não obteve vaga nenhuma tocante ao grupo dos museólogos.

Tabela 4. Hipônimos dos perfis de arquivista e de bibliotecário-documentalista

Denominação	Denominações específicas	Nº de anúncios	Nº de vagas
Arquivista	Arquivista	45	69
	Técnico de arquivo	4	4
	Auxiliar de arquivo	8	13
	Assistente de arquivo	2	2
	Operador de digitalização	4	5
	Técnico de preservação	7	8
Bibliotecário	Bibliotecário	64	77
	Técnico de biblioteca	5	5
	Auxiliar de biblioteca	15	51
	Assistente de biblioteca	3	3
Documentalista	Documentalista	13	13
	Técnico de documentação	1	1
	Assistente de documentação	1	1
Total		172	252

As designações de bibliotecário e documentalista acolhem vários níveis de vagas específicas. As denominações são, as vezes bem atípicas, assim o perfil de bibliotecário é chamado em cinco oportunidades de emprego com o sinônimo bibliotecário (a), em outras quatro biblioteconomista, uma vez coordenador de biblioteca, igual que as vagas mais ligadas às TIC que o nomeiam de bibliotecário-gestor de conhecimento, infoeducador e bibliotecário de dados. Esta é destaque se adicionada a analista de dados, pois contemplam uma representação de 12 vagas. Os técnicos de biblioteca são designados também técnicos de Biblioteconomia. E os auxiliares de biblioteca aparecem nomeados ademais como auxiliar administrativo de biblioteca.

Tabela 5. Denominações integradas no perfil de cientista da informação

Denominação	Anúncios		Vagas	
	N	%	N	%
Arquiteto da informação	26	10,19	29	8,50
Analista de SEO	17	6,66	17	4,98
Analista de dados	11	4,31	11	3,22
Assistente de e-comercio	8	3,13	8	2,34
Gestor de projetos	6	2,35	9	2,63
Analista de inteligência competitiva	5	1,96	5	1,46
Analista de TI	5	1,96	5	1,46
Gestor de informação	3	1,17	3	0,87
Desenvolvedor de sistemas	1	0,39	1	0,29
Analista de mídias (Social media)	1	0,39	1	0,29
Total	83	32,51	89	26,04

Os documentalistas aparecem três vezes como especialista em documentação ou como documentador, duas como analista de documentação, analista de acervo e documentalista de sistemas. Estas últimas vagas aparecem num contexto muito associado às TIC.

O grupo de cientista da informação integra as vagas de caráter mais transformador e com designação inovadora e recente, mesmo que dentro de um sentido não exclusivo para formados nos cursos de Ciência da Informação. Esta denominação reúne, na origem, 38 perfis diferentes, necessitados de equivalência subordinante para fazer qualquer análise comparativa.

Mostra da sua dispersão são as 24 designações com apenas uma aparição, assim como o fato de que em 83 anúncios são solicitadas só 89 vagas. É relevante a diversidade de vagas para analistas que oferecem possibilidades a formados e profissionais da Ciência da Informação com um bom desempenho estatístico e informático.

O grupo de cientista da informação integra as vagas de caráter mais transformador e com designação inovadora e recente, mesmo que dentro de um sentido não exclusivo para formados nos cursos de Ciência da Informação

A subcategoria arquiteto da informação inclui as diferentes denominações dos analistas de experiência do usuário (UX), assim como de web designer, produtor de conteúdo, cientista da informação-UX research, webmaster ou administrador de sites web, enquanto especialistas que se ocupam da criação e gestão de objetos digitais.

As outras subcategorias de maior desenvolvimento se estabelecem em torno dos termos SEO (*search engine optimization*) e analista de dados. SEO contém as múltiplas expressões de analista de SEO, como SEO-UX, web analytics, analista de marketing de conteúdo, gerente de produção e analista desenvolvedor.

Tabela 6. Denominações mais demandadas

Denominação	Anúncios		Vagas	
	N	%	N	%
Bibliotecário	64	78	25,09	22,87
Arquivista	42	66	16,47	19,35
Arquiteto da informação	26	29	10,19	8,50
Analista de SEO	17	17	6,66	4,98
Auxiliar de biblioteca	15	53	5,88	15,54
Analista de dados	11	11	4,31	3,22
Documentalista	11	11	4,31	3,22
Auxiliar de arquivo	8	13	3,13	3,81
Assistente de e-comercio	8	8	3,13	2,34
Gestor de projetos	6	9	2,35	2,63
Analista de inteligência competitiva	5	5	1,96	1,46
Analista de TI	5	5	1,96	1,46
Técnico de preservação digital	4	5	1,56	1,46
Digitalizador	4	5	1,56	1,46
Gestor de informação	3	3	1,17	0,87

Por sua vez, analista de dados age como sinónimo documental de cientista de dados e assistente de dados, assim como de analista de SQL. Bem próxima, a denominação de gestor de projetos se singulariza em project manager ou gerente de projetos, junto com analista, consultor e técnico em gestão de projetos, com intenção de planejar, organizar e supervisar projetos ou liderar projetos em equipe. Irão atender a projetos de ação cultural, pesquisa, design, soluções digitais, dados, engenharia, saúde, vendas ou inteligência. É de notar que nenhuma destas ofertas inclui nomes típicos das nossas profissões.

Estes perfis profissionais respondem às exigências versáteis da informação científica e tecnológica no mundo empresarial e industrial

Se representam as 15 denominações que ocupam a metade superior das ofertas, após ter feito as oportunas equivalências. A maioria recebe nomes de perfis tradicionais, pelo que se devem analisar os conhecimentos solicitados para comprovar a execução dos objetivos propostos. Mesmo assim, 10 das 15 denominações constituem ofertas próprias do ambiente digital, alguma com uma implantação superior aos 10%. Estes perfis profissionais respondem às exigências versáteis da informação científica e tecnológica no mundo empresarial e industrial. Algumas das quais já foram considerados em pesquisas anteriores (**Montalli**, 1997; **Tarapanov**, 1997).

3.1. Ramos de atividade das empresas empregadoras

Os ramos com maior número de anúncios oferecem diferentes setores de atuação. Assim, em relação a educação se identificam dois grandes subdivisões: a educação infantil, fundamental e média, e a educação superior precisada em universidades, faculdades e centros privados.

Na tabela 7 se atende aos ramos de atividade das empresas que fazem as ofertas de emprego, quando declarado. Nos anúncios, 32,9% das empresas optam pela confidencialidade na identificação dos seus dados ou não mostram o ramo concernente. No ramo da saúde aparecem os âmbitos de arquivo hospitalar, comercio de planos de saúde, sistemas de gestão hospitalar e previdência, para os que se solicita experiencia na gestão eletrônica de documentos ao na área da saúde, assim como em pesquisas com usuários, métricas e relatórios, tecnologias aplicadas a saúde, no cadastro na área da saúde ou no desenvolvimento de projetos na área da saúde. No que concerne ao marketing digital se categoriza em duas subdivisões: companhias de marketing e marketing da informação, associada a última à gestão da informação. Identificou-se também consultoria na área da educação. No caso do sector jurídico, as atividades são segmentadas em arquivo jurídico, escritório de advogados, tribunais, legislação trabalhista. Já para o ramo da Informática, as oportunidades se compilam para serviços e tecnologias da informação, arquivos institucionais de empresas informáticas, serviços para informática, comercio de equipamentos, soluções em informática e desenvolvimento de software.

Tabela 7. Ramos de atividade das empresas

Ramo	Nº de anúncios
Educação	33
Saúde	26
Marketing	21
Jurídico	20
Informática	16
Recursos humanos	9
Consultoria de projetos	8
Serviços	6
Comunicação social	5
Bancário-financeiro	5
Contabilidade	4
Telecomunicações	4
Alimentação e bebidas	3
Transporte	3
Indústria farmacêutica	2
Hoteleira	2
Turismo	2
Diversão	1
Petróleos	1
Total	171

3.2. Conhecimentos transversais sobre a transformação digital

Os conhecimentos sobre a transformação digital estão distribuídos em duas categorias principais. A primeira, de natureza transversal, considera aqueles que são essenciais na atividade da maioria dos sectores profissionais e mesmo no desenvolvimento de muitas das atuações diárias. A segunda e mais numerosa vem determinada pelas especificas atividades profissionais de informação as que se destinam.

Tabela 8. Macro-categorias dos conhecimentos solicitados

Categorias de conhecimentos	Anúncios		Vagas	
	Frequência	%	Frequência	%
Conhecimentos transversais	316	18,27	365	15,41
Conhecimentos específicos	1.413	81,72	1.997	84,58
Total	1.729	99,99	2.362	99,99

A categoria dos "Conhecimentos transversais de Informática" se encaixa na visão geral dos resultados, pois na estrutura textual das ofertas vem diferenciada da classe Software, denotada na tabela 1. Seus termos têm como cabeça da descrição o pacote *Office*, que progride nos padrões mais comuns dos registros digitais, *Word*, *Excel* o PDF.

Respeito aos registros da tabela 8, a entrada Excel inclui sete vagas que solicitam conhecimentos de "Editor de planilhas". Assim mesmo, "Conhecimentos de Informática" abrange 13 vagas de "Conhecimentos básicos" e 5 de "Intermediários" e outro de habilidades computacionais. Inclusive em sua expressão indeterminada e genérica, os conhecimentos de internet é outro dos elementos notáveis desta lista, já que é uma ferramenta indispensável para o desenvolvimento de qualquer trabalho, pois além de ser a base das mensagens instantâneas é também a infraestrutura que permite muitos dos serviços e aplicações utilizadas e até mesmo do teletrabalho. Como "Elaboração de procedimentos" se deve de entender o fluxo de trabalho que se faz nas empresas e centros de informação, que requer o apoio iniludível da informática.

Tabela 9. Conhecimentos transversais de informática

Conhecimentos transversais de Informática	Frequência
Conhecimentos de informática	65
Conhecimentos de internet	36
Envio de e-mails	20
Elaboração de procedimentos	11
Sistema operacional *Windows*	11
Microsoft Office	129
Excel	62
Outlook	3
Word	26
Microsoft Access	1
Tecnologias de gestão administrativa	1
Total	365

Microsoft Office manifesta-se como uma ferramenta imprescindível no trabalho diário. Em 28 das vagas *Office* é o único conhecimento de Informática requerido. Sua presença, junto aos formatos mais habituais de arquivo digital, aumenta as possibilidades de obter emprego e até de apreciação laboral, pois os profissionais usam continuamente os processadores de texto para desenhar exposições, gerenciar dados e manter bancos de dados. Esta apreciação coincide com a feita por **Bahia** (2018). Uma vantagem considerável da utilização do *Microsoft Office* é a sua assiduidade na gestão empresarial e na administração pública, assim como na atividade diária do ensino e da pesquisa universitária (**White**, 2012). Motivos que levam a aquisição de competências práticas em muitos currículos de graduação. Quanto mais nos cursos de informação onde a familiaridade com a suíte *Microsoft Office* ocupa cada vez maior espaço na criação e preservação de documentos e na gestão de dados e projetos digitais. Especialmente no relativo ao *Excel* que capacita aos estudantes, também aos profissionais, para criar folhas, tabelas e séries, com a consequente organização e introdução de dados, gráficos e fórmulas.

Desde o início, fica salientado que os profissionais da informação, entre outras competências e aptidões, devem ser proficientes e estar confortáveis nas TIC

Desde o início, fica salientado que os profissionais da informação, entre outras competências e aptidões, devem ser proficientes e estar confortáveis nas TIC, mesmo quando, como é o caso aqui, se trate de uma base cognitiva transversal que, ao limitar os conhecimentos digitais ao pacote *Office*, se volta um argumento a mais para confundir as atividades de qualquer tipo de arquivo de documentos com as próprias da função administrativo-burocrática, no que coincide com os imprecisos "Conhecimentos de Informática", "Tecnologias de gestão administrativa" e "Conhecimentos de internet".

4. Análise e interpretação dos resultados: conhecimentos específicos

A análise e interpretação dos dados sobre conhecimentos específicos detalhada permite identificar uma amostra dispersa, como confirmado pelos 286 conhecimentos específicos representados que atingem as 2.361 aparições nas chamadas das vagas. Assim, além das categorias de agrupação apresentadas na tabela 1, deve ser avaliado o aspecto intercategorial das associações terminológicas de conhecimentos, entre cujos elementos não se pode estabelecer hierarquia, de modo que se dispersam por várias das macro-categorias estabelecidas naquela tabela, mas que pertencem ao mesmo marco semântico. Se exploram agora as facetas de conhecimentos específicos de maior frequência, incluindo possíveis sinônimos e hipônimos. A frequência das denominações dos conhecimentos nas vagas se considera à parte da frequência dos termos associados ao seu campo semântico.

Tabela 10. Grandes facetas de conhecimentos específicos

Facetas	Frequência genérica	Frequência termos associados	Total do cluster
Objetos digitais	232	164	396
Bancos de dados	78	275	353
Bases de dados	68	37	105
Serviços digitais	88	204	292
Análise de dados	31	12	43
Bases de conhecimentos – IA	40	16	56
Software	34	176	210
SOC	63	70	133
Direitos e valores	34	0	34
Internet	109	75	184
Web, portais e redes	31	137	168

4.1. Em relação à gestão e armazenamento dos objetos digitais

A faceta dos objetos de conteúdo inclui 20 ocorrências correspondentes a conhecimentos sobre coleções e fontes digitais, enquanto outras 124 são alusivas aos documentos digitais e 22 aos digitalizados; sem esquecer as 9 relativas a sua origem empresarial. Se consideram inclusive os tipos de documentos digitais, em especial os livros, 22 vezes, e os periódicos, 35, bem como as 45 em relação ao seu processamento, preservação, conservação e curadoria e, com notório destaque, as 61 de sua gestão. As 58 repetições de documentos digitais e de digitalização de documentos provenientes de outros suportes implica uma mudança de mentalidade, de gestão e até de utilização (**Dodebei**, 2011) que oferece muitas vantagens aos centros de informação e serviços de informação empresarial, tais como a redução de custos e uma melhor organização dos processos técnicos e das consultas.

Os bancos e bases de dados, que já eram um elemento fundamental na gestão bibliográfica e de referência quando a CI foi formada (**Shera**; **Cleveland**, 1977), agora foram melhorados pois os documentos digitais facilitam o processamento do texto completo, da imagem e do som, a ponto de se tornarem o único sistema de armazenamento e gestão de muitos arquivos, bibliotecas e serviços de informação. O registro da informação adquire neles um carácter relacional que permite a reutilização do conhecimento através da inteligência artificial. Além da aparição genérica dos bancos e bases de dados refletida na tabela 9, a administração e gestão de bancos de dados é identificada em 183 ocasiões, juntamente com outras 92 de seu processo que inclui a construção, organização e atualização. O mesmo acontece com as bases de dados, para as quais se particularizam 16 vezes conhecimentos respeito a sua gestão, mesmo a través de ferramentas SQL, outras 9 em relação à pesquisa, assim como 12 relativas aos seus produtores e software. Produtores e software para bases de dados exemplificam bem as aparições terminológicas inter-categoriais. Por sua vez, SQL se mostra como conhecimento esperado em particular nas esferas dos negócios e jurídica.

O macro-termo serviços digitais, que aparece em 51 vagas, se relaciona de modo direto com as 16 concernentes a bibliotecas digitais bem como com seu desenvolvimento e informatização. Outras 18 posições abordam os serviços de empréstimo, referência e DSI. Porém, aparece um vazio no caso dos arquivos que tem a presencia limitada a três vagas para arquivos eletrônicos de hospitais. As 61 ocasiões tocantes aos serviços de gestão e processamento digital da informação ou dos documentos se estendem por todo tipo de centros. Assim como as soluções de software que o processa, em especial *Pergamum* com presença em 11 vagas. Ao mesmo tempo que, em 13 ocorrências, se precisa dispor de serviços telemáticos para o acesso à informação e, em outras 18, de interfaces de conexão entre sistemas, assim como entre estes e os usuários. Logicamente as necessidades dos usuários devem ser atendidas mediante serviços e gestão digitais, conforme manifestam os conhecimentos para 57 vagas. Tanto as bibliotecas como os centros empresariais estão associados por 34 vezes também a serviços de informação eletrônicos sob nomes diferentes. Completam esta faceta as 10 vagas que falam de computação em nuvem para bibliotecas universitárias e de aplicação *Oracle* na nuvem. A acumulação dos conhecimentos correspondentes a esta faceta expressa a grande penetração da transformação digital nas tarefas profissionais.

4.2. Conhecimentos em análise de dados e software

Nos anúncios, a procura em 12 entradas por bibliotecário e por cientista de dados mostra a abertura de possibilidades de atuação dos especialistas que trabalham em serviços de Ciência da informação. É consequência da necessidade das empresas, centros de educação superior e organismos públicos de administrar, analisar e tratar os grandes volumes de dados, mediante a aplicação das TIC, em especial da inteligência artificial. E atende ao descobrimento de padrões e tendências que apoiem a tomada de decisões com relação aos produtos e serviços da correspondente empresa ou instituição. Pelo que o cientista de dados é um analista que utiliza técnicas de mineração e de estatística para extrair valor dos dados. Também é um especialista no setor de atuação, pelo que precisará, ademais, de conhecimentos económicos, financeiros, legais, médicos, biológicos, contábeis, de turismo, comerciais... Mais não é alheia a presença, ainda simbólica pelo seu número de ocorrências, da denominação bibliotecário de dados junto a mais comum de cientista de dados entre os requisitos. Pelo que os anúncios começam a incluir aos profissionais que se tem formado ou que operam em serviços de informação entre os capacitados para analisar os dados e avaliar sua confiabilidade, mostra da confiança das empresas e organizações na possibilidade de desenvolver as tarefas relativas a obtenção de informação a partir dos dados. Este assunto sempre foi considerado nos processos de análise de conteúdo dos documentos, mesmo que os dados tratados fossem de quantidade bem menor que no caso dos *big data* (**Semeler**; **Pinto**; **Rozados**, 2019). As vagas precisam em 19 entradas as conhecidas fases da análise de dados: captura, mineração, categorização, confiabilidade, associação correlativa e proposta de modelos. Bem como se explicitam, em 18 ocasiones, na gestão de dados de pesquisa (**Davis**; **Cross**, 2015). Como o seu principal objetivo são os processos de negócio e o apoio a tomada de decisões institucionais, o profissional que lida com dados deve ter domínio das ferramentas analíticas a mais de conhecimentos sobre o campo de aplicação: redes sociais, saúde, finanças, educação e até a própria biblioteca e os outros centros de informação (**Dos-Anjos**; **Dias**, 2019). A presença desses profissionais vá em aumento, note-se que este tipo de conhecimentos não aparecia na pesquisa feita no ano 2011 (**Moreiro**; **Vergueiro**, 2012), permitem aos profissionais analisar e aplicar a informação deduzida para resolver problemas corporativos ou de pesquisa. Este marco se estabelece como uma das orientações mais renovadoras no conhecimento especializado dos profissionais da informação.

Ligado à experiência em análise e gestão de dados emerge em 11 anúncios o uso da Inteligência artificial e da Engenharia do conhecimento. Atuam em especial, segundo confirmam as 29 aparições, na elaboração e gerenciamento de bases de conhecimentos acumulados pela interpretação lógica da experiencia humana através dos métodos de inferência. Sua denominação como sistemas especialistas se deve a que imitam o pensamento dos especialistas na solução de problemas e tomada de decisões. Reconhecidos há mais de vinte anos dentro dos serviços de informação acadêmica e de pesquisa (**Mendes**, 1997), agora se mostram renovados para consultar catálogos e fontes de informação e preparar descrições bibliográficas pela aplicação do *machine learning*. Ao mesmo tempo que, usando a capacidade dos *bots*, interagem com as pessoas através da fala e permitem atender as necessidades dos usuários. Neste sentido, em 17 ocasiões os anúncios requerem conhecimentos de programação C++ e de outras linguagens orientadas a objetos, de estatística aplicada e de redes neurais para conexão de nodos nas redes semânticas.

Sem dúvida, para além da execução específica dos parágrafos anteriores, existem 34 entradas genéricas de software, que são completadas com as 17 de linguagens de programação especificadas em .NET, *JAVA*, *Lotus* e *Linguagem C*, junto a grande continuidade de 174 vagas que demandam conhecimentos em sistemas operacionais, com realce marcante de 148 para OS, mas com presença também de *MS DOS*, *Linux*, *UNIX* e, como antes relacionado nos conhecimentos transversais, de *Windows*. Aparece até espaço para o software de segurança. A comparação entre os 24 conhecimentos sobre software documental requeridos na pesquisa preceden-

> Os anúncios começam a incluir aos profissionais que se tem formado ou que operam em serviços de informação entre os capacitados para analisar os dados e avaliar sua confiabilidade, mostra da confiança das empresas e organizações na possibilidade de desenvolver as tarefas relativas a obtenção de informação a partir dos dados

te (**Moreiro**; **Vergueiro**, 2012) e o crescimento identificado neste apartado fala da diversificação, especialização e variedade dos requisitos atinentes a um âmbito de trabalho de caráter digital. A ocorrência atual atinge 115 vagas que demandam soluções de software relativas ao processamento de todo tipo de informação, centros e tarefas, muitas delas expostas nas anteriores facetas de esta análise. E excluindo da contagem as linguagens de programação, os sistemas operacionais e, claro, os conhecimentos transversais.

> Resulta imprescindível no exercício profissional dispor de conhecimentos relativos aos direitos e valores que as atividades tecnológicas também têm feito mudar

A faceta de representação e organização do conhecimento contém três especificações. Uma primeira relativa a catalogação em linha e a catalogação de recursos eletrônicos que aparece em 13 vagas, que engloba também outras 22 com os formatos para registros bibliográficos e os catálogos on-line. Uma segunda, ao redor dos sistemas de organização do conhecimento que abrange 26 vagas de maneira geral e outras 10 sobre tesauros, ontologias e taxonomias. Enquanto a terceira, compreende a indexação automática com 14 petições. Se completa com 48 presenças relacionadas com o software de indexação automática, a recuperação de informação e suas estratégias e os motores de busca.

4.3. Conhecimentos da internet, web e portais web

Os profissionais da informação são considerados especialistas avançados nas ocorrências que pedem competências relacionadas à internet. Para avaliar a importância da internet, tabela 11, vale a pena lembrar que esta é a infraestrutura das intranets e extranets, uma vez que são desenvolvidas com base nos seus próprios protocolos, como ocorre também com as redes locais e os sistemas cooperativos.

Os casos de serviços distribuídos mediante internet afetam ao fornecimento e transferência de informação entre os sistemas, centros e serviços, mais também entre as empresas, indústrias, centros de ensino e entidades financeiras, ou para qualquer serviço de informação pública. Por isso, as vagas solicitam a capacidade de selecionar a melhor informação quando é necessário buscar e pesquisar na internet. As redes de bibliotecas brasileiras, entre elas a rede de catalogação *Bibliodata* ou as redes de bibliotecas do Congresso, bem como outras redes e sistemas de informação e comunicação, como as redes locais ou as redes e sistemas cooperativos se baseiam sobre o desenvolvimento das TIC, em particular da internet e da web que com o protocolo *Z 39.50* e os formatos de intercâmbio tem facilitado a cooperação e melhorado os serviços. Mas em particular porque através da internet, circulam as petições de conhecimentos sobre *e-commerce*, *e-business*, *e-health*, *e-education*, interação política, realidade virtual e mesmo das redes sociais.

Tabela 11. Facetas de internet, web e portais web

Internet	**f**	**Web**	**f**	**Portais web**	**f**
Internet	85	Web	13	Portais e *websites*	17
Intranet	22	Avaliação na web	4	Criação do *website*	3
Extranet	2	Acessibilidade web	1	Atualização do *site*	2
Busca na internet	5	Usabilidade na web	1	Gerenciamento da informação na web	2
Pesquisa na internet	15	XML	2		
Internet e informação pública	3	RDFS	1	Portais de periódicos	5
Sistemas de informação em internet	9	Web semântica	1	Portais de pesquisa	8
Redes e sistemas de informação e comunicação	9	HTML	15	SEO	23
Redes de bibliotecas brasileiras	11	XHTML	9	Ferramentas SEO	7
e-business	4	METS	4	Edição na web	2
e-commerce	6	*Mapping*	1	Marketing na web	2
e-health	2	Modelo de dados	15	Marketing serviços de informação	3
e-education	1	Vocabulário de metadados	3		
Realidade virtual	3	DHTML	9		
Redes sociais	7	Javascript	8		
		CSS	11		
Total	184		94		74

A web, serviço de internet, é solicitada a maioria das vezes nos anúncios enquanto à sua noção mais comum, mas também no tocante à acessibilidade dos seus conteúdos e a sua usabilidade, avaliação e gerenciamento. Porém é escassa a visibilidade, apenas uma vez, da web semântica, mas não de seus componentes, normas e tecnologias de descrição dos conteúdos que aparecem com certa frequência, desde o estândar de representação XML até RDFS, modelo de dados para os recursos e suas relações, passando pelos vocabulários de metadados e METS, ou *mapping* entre vocabulários para marcar documentos ou os formatos de anotação semântica HTML e XHTML. Assim como DHTML que, combinado com Javascript e com CSS, serve para criar sites interativos, ou outro software aplicado a arquitetura da informação da web como *Axure* e *Apache*. A importância dos encargos de conhecimento sobre os portais e páginas web, sua criação, conteúdos e atualização deve-se ao fato de que através deles é oferecido acesso a produtos e serviços, de modo que também são particularizados nos anúncios segundo seu conteúdo ou função como portais de marketing, de pesquisa ou de periódicos, e até a relação direta com o marketing de serviços e produtos de informação. Neste contexto se situam as numerosas aparições que alcançam as capacidades SEO e das ferramentas de otimização de sites.

A identificação analítica não pode limitar-se a enfocar somente conhecimentos e capacidades técnicos, pois envolve as circunstâncias sociais, educativas e jurídicas presentes na atividade profissional que não pode ficar longe dos padrões éticos e culturais ou das novas formas de propriedade e acesso à informação. Resulta imprescindível no exercício profissional dispor de conhecimentos relativos aos direitos e valores que as atividades tecnológicas também têm feito mudar (**Habermas**, 2012), bem como outras diretamente transcendidas por elas, sem as quais a devida atenção aos usuários e aos serviços não seria alcançada. São 34 os conhecimentos espalhados entre a exclusão digital e a censura; a propriedade intelectual e os direitos autorais; a ciência aberta e o acesso aberto; a segurança da informação autenticada mediante a assinatura eletrônica ou o certificado digital; e inclusive os eventos de *hackers*.

O surgimento de perfis bem distantes das denominações e atividades tradicionais, bem como as mudanças que a transformação digital apresenta em um cenário altamente complexo para o mercado de trabalho

5. Conclusões

A presença plena e concludente de conhecimentos correspondentes ao âmbito digital justifica a realização desta pesquisa e destaca as consequências da transformação digital. Demonstra-lo as 1.719 frequências nos 255 anúncios identificados e as 2.362 nas 341 vagas oferecidas nesses anúncios, que atingem uma média relativa de 6,92 conhecimentos por vaga.

O surgimento de numerosos perfis digitais está mudando profundamente o desempenho profissional. É uma das causas da grande mobilidade ocasionada, porque os serviços de natureza tecnológica precisam de pessoas qualificadas, como também todo tipo de empresas que estão a entrar na era digital. Isto torna o mercado de trabalho complexo e dinâmico com novas demandas e oportunidades para o profissional da informação. Bem é verdade que, ao mesmo tempo, muitos dos empregos aos que aspiram os estudantes atuais podem ter desaparecido até o final desta década.

Em vários campos de atuação dos profissionais da informação se percebe um afastamento das denominações tradicionais consequente a mudança dos serviços de informação prestados. Neste sentido, os arquivos e bibliotecas são considerados serviços dentro das organizações e não como os quase únicos tipos de centro a que se aspira na busca de emprego. Notoriamente nos setores de aplicação comercial, empresarial, jurídica, pesquisadora e de saúde que tendem a preferir no título das ofertas o termo analista em substituição das denominações precedentes. Na procura de trabalho nestes setores, se deve prestar especial atenção ao vocabulário utilizado nos anúncios de emprego. Não é suficiente identificar o título da oferta, pois a conveniência da eleita vem razoada nos requisitos exigidos ou nas atividades a desenvolver. É determinante saber adaptar as candidaturas de acordo com as necessidades manifestadas nos anúncios. O esforço para integrar as novas atividades e conhecimentos nas profissões da informação obriga a buscar nomes diferenciados para as vagas oferecidas nos anúncios. Às vezes, a partir de um nome tradicional que se relaciona com outro substantivo ou adjetivo para articular a profissão, se não o conhecimento, com o ambiente digital. Outras vezes, se aceitam nomes alheios que surgiram na transformação digital e que se adaptam às nossas profissões ou que até permanecem invariáveis conforme eram na sua procedência.

Os anúncios mostram que os profissionais da informação deverão dominar as habilidades e conhecimentos correspondentes ao ambiente digital. As funções que os profissionais desempenham não podem ser feitas sem o tratamento de sistemas e processos digitais. É claro, em arquivos e bibliotecas, mas sobretudo em empresas e organizações. Há muitas oportunidades de colaboração em setores como administração, negócios, saúde, direito, educação, ... para as habilidades técnicas da profissão, agora em grande parte modificadas pelas novas condições. Em ações que aproveitam as possibilidades oferecidas pelo digital em perfis de projeção indubitável como analista de marketing, analista de informação digital, especialista em projetos digitais, UX, gerente de projetos web ou gerente de dados. Estes e outros perfis descritos no artigo mostram espaço para a colaboração profissional interdisciplinar dentro do grande sector das TIC que impulsiona e reorienta os procedimentos técnicos próprios. É claro que as organizações procuram profissionais para ajudá-las a alcançar seus objetivos dentro da transformação digital. Profissionais capazes de gerenciar informações digitais, o que envolve sua análise, exploração, preservação e disseminação através de mídias digitais, sites e redes sociais. Estas habilidades de comu-

Em vários campos de atuação dos profissionais da informação se percebe um afastamento das denominações tradicionais consequente a mudança dos serviços de informação prestados

nicação orientada aos clientes e usuários da informação acompanha a demanda dos empregadores sobre a experiência de trabalhar e servir os mais diversos grupos e comunidades.

Habilidades de comunicação orientada aos clientes e usuários da informação acompanham a demanda dos empregadores sobre a experiência de trabalhar e servir os mais diversos grupos e comunidades

Naturalmente, as ofertas de trabalho analisadas não se dirigem a programadores ou tecnólogos, nem sequer as mais inovadoras apresentadas no perfil de cientista da informação, mas a profissionais com autonomia suficiente para criar e gerenciar informação digital (bancos e bases de dados, sistemas de gestão de conteúdo, gestão de documentos electrónicos, linguagens de marcação, sistemas de recuperação, técnicas de programação web, preservação e conservação digital). Além disso, são solicitadas competências estatísticas, tais como folhas de cálculo avançadas, técnicas de métricas de informação ou análise de dados, que são depois aplicadas à comunicação e visibilidade das organizações onde trabalham. Esta é a razão pela qual, entre os conhecimentos necessários, se encontra a arquitetura da informação, o marketing digital, a visualização da informação, a análise e posicionamento web, as redes sociais. Este fato prolonga-se à educação que os estudantes devem receber e à atualização dos profissionais através dos quais são treinados para conhecer, entender e lidar bem com as TIC. Ambos têm de saber como funcionam as empresas e as organizações (sociologia das organizações, fundamentos da administração de empresas, transparência e governo electrónico, gestão da informação). Este contexto inclui arquivos e bibliotecas, que são cada vez mais valorizados dentro das organizações, o que significa perder o seu monopólio habitual como centros de gestão de informação.

Dois dos elementos mais afastados da formação habitual para a profissão derivam do aumento da capacidade de armazenamento, processamento e distribuição de dados digitalizados entre os diferentes servidores, nuvens e redes de computadores disponíveis nos centros, empresas e instituições. Estes elementos procuram tirar partido de todas as capacidades de acesso, colaboração e tomada de decisões em qualquer momento. O que implica a aplicação detalhada de técnicas de inteligência artificial e algoritmos de autoaprendizagem para gerir os *big data* com todas as suas peculiaridades e adaptar-se à sua evolução dinâmica. Sem dúvida, a preparação relacionada com estes conhecimentos de análise e gestão tecnológica são já uma realidade nas oportunidades de emprego mais renovadas que, ao mesmo tempo, são as mais bem remuneradas. Muito próxima a estes recursos está a demanda por conhecimentos de gestão de projetos que reconhece a competência dos profissionais da informação para organizar tarefas complexas e para colaborar com outras unidades ou entidades.

A preparação relacionada com estes conhecimentos de análise e gestão tecnológica são já uma realidade nas oportunidades de emprego mais renovadas que, ao mesmo tempo, são as mais bem remuneradas

6. Referencias

Applegate, Rachel (2010). "Job ads, jobs, and researchers: Searching for valid sources". *Library & information science research*, v. 32, n. 2, pp. 163-170.
https://doi.org/10.1016/j.lisr.2009.12.005

Bahia, Eliana-Maria; **Moreiro-González, José-Antonio** (2019). "Ofertas de emprego: habilidades necessárias para arquivistas em empresas no Brasil". *Informação & informação*, v. 24, n. 1, pp. 424-441.
https://doi.org/10.5433/1981-8920.2019v24n1p424

Bahia, Eliana-Maria (2018). *Competências arquivísticas no mercado de trabalho*. Curitiba: Appris editora. ISBN: 978 85 473 0855 1

Barion, Eliana-Cristina-Nogueira; **Lago, Décio** (2008). "Mineração de textos". *Revista de ciências exatas e tecnologia*, v. 3, n. 3, pp. 123-140.
https://revista.pgsskroton.com/index.php/rcext/article/view/2372

Belluzzo-Baptista, Regina-Celia (2011). "As competências do profissional da informação nas organizações contemporâneas". *Revista brasileira de biblioteconomia e documentação*, v. 7, n. 1, pp. 58-73.
https://rbbd.febab.org.br/rbbd/article/view/180/186

Cai, Gui-Lan; **Xu, Kai**; **Chen, Ping-Hua** (2016). "Based on Solr distributed classification algorithm of system design for science and technology plan projects". Em: Xing, Zhang (ed.). *Computer science, technology and application: Proceedings of the CSTA2016*, pp. 256-263. New Jersey: World Scientific Publishing.
https://doi.org/10.1142/9789813200449_0033

Cox, Andrew M.; **Corrall, Sheila** (2013). "Evolving academic library specialties". *Journal of the American Society for Information Science and Technology*, v. 64, n. 8, pp. 1526-1542.
https://doi.org/10.1002/asi.22847

Croneis, Karen; **Henderson, Pat** (2002). "Electronic and digital librarian positions: A content analysis of announcements from 1990 through 2000". *The journal of academic librarianship*, v. 28, n. 4, pp. 232-237.
https://doi.org/10.1016/S0099-1333(02)00287-2

Davis, Hilary; **Cross, William** (2015). "Using a data management plan review service as a training ground for librarians". *Journal of librarianship and scholarly communication*, v. 3, n. 2, eP1243.
https://doi.org/10.7710/2162-3309.1243

Detmering, Robert; **Sproles, Claudene** (2012). "Forget the desk job: Current roles and responsibilities in entry-level reference job advertisements". *College & research libraries*, v. 73, n. 6, pp. 543-555.
https://doi.org/10.5860/crl-304

Dodebei, Vera (2011). "Cultura digital: novo sentido e significado de documento para a memória social". *Datagramazero - Revista de ciência da informação*, v. 12, n. 2, art. 01.
http://www.brapci.inf.br/_repositorio/2011/04/pdf_15b7c5a842_0016272.pdf

Dos-Anjos, Renata; **Dias, Guilherme** (2019). "Atuação dos profissionais da informação no ciclo de vida dos dados - Dataone: um estudo comparado". *Informação & informação*, v. 24, n. 1, pp. 80-101.
https://doi.org/10.5433/1981-8920.2019v24n1p80

Dutra-Augusto, Tatiana N.; **Carvalho-Vasconcelos, Andréa** (2006). "O profissional da informação e as habilidades exigidas pelo mercado de trabalho emergente". *Encontros Bibli: revista eletrônica de biblioteconomia e ciência da informação*, v. 11, n. 22, pp. 178-194.
https://doi.org/10.5007/1518-2924.2006v11n22p178

Freitas, Henrique; **Janissek, Raquel** (2000). *Análise léxica e análise de conteúdo: técnicas complementares, sequenciais e recorrentes para exploração de dados qualitativos*. Porto Alegre: Sagra Luzatto.

Gerolimos, Michalis; **Malliari, Afrodite**; **Iakovidis, Pavlos** (2015). "Skills in the market: an analysis of skills and qualifications for American librarians". *Library review*, v. 64, n. 1-2.
https://doi.org/10.1108/LR-06-2014-0063

Gold, Melissa L.; **Grotti, Margaret G.** (2013). "Do job advertisements reflect ACRL's standards for proficiencies for instruction librarians and coordinators? A content analysis". *The journal of academic librarianship*, v. 39, n. 6, pp. 558-565.
https://doi.org/10.1016/j.acalib.2013.05.013

Guerra-Carvalho, Isabel (2006). *Pesquisa qualitativa e análise de conteúdo: sentidos e formas de uso*. Estoril: Principia, 2006. ISBN: 978 972 8818661

Habermas, Jürgen (2012). *Teoria do agir comunicativo: racionalidade da ação e racionalização social*. Vol. 1. São Paulo: Editora WMF Martins Fontes. ISBN: 978 8578274603

Harper, Ray (2013). "The 'killer' CV: Is it useful for the information professional?". *Business information review*, v. 30, n. 3, pp. 152-157.
https://doi.org/10.1177/0266382113504851

Harper, Ray (2012). "The collection and analysis of job advertisements: A review of research methodology". *Library and information research*, v. 36, n. 112, pp. 29-54.
https://doi.org/10.29173/lirg499

Hirsch, Laurence; **Hirsch, Robin**; **Saeedi, Masoud** (2007). "Evolving Lucene search queries for text classification". Em: *Proceedings of the 9th annual conference on genetic and evolutionary computation*, July 7-11, pp. 1604-1611.
https://doi.org/10.1145/1276958.1277279

Holsti, Ole R. (1969). *Content analysis for the social sciences and humanities*. Reading: Addison-Wesley. ISBN: 978 0 201029406

Hong, Jung-Eun (2016). "Identifying skill requirements for GIS positions: A content analysis of job advertisements". *Journal of geography*, v. 115, n. 4, pp. 147-158.
https://doi.org/10.1080/00221341.2015.1085588

ISO/TR 28118:2009. *Information and documentation - Performance indicators for electronic library services*. Geneva: International Organisation for Standardisation.

Javed, Faizan; **Luo, Qinlong**; **McNair, Matt**; **Ferosh, Jacob**; **Zhao, Meng**; **Kang, Tae-Seun** (2015). "Carotene: A job title classification system for the online recruitment domain". Em: *IEEE First international conference on big data computing service and applications*, Redwood City, CA, pp. 286-293.
https://ieeexplore.ieee.org/document/7184892
https://doi.org/10.1109/BigDataService.2015.61

Kennan, Mary-Anne; **Cole, Fletcher**; **Willard, Patricia**; **Wilson, Concepción**; **Marion, Linda** (2006). "Changing workplace demands: What job ads tell us". *Aslib proceedings*, v. 58, pp. 179-196.
https://doi.org/10.1108/00012530610677228

Kim, Jeonghyun; **Warga, Edward**; **Moen, William** (2013). "Competencies required for digital curation: An analysis of job advertisements". *The international journal of digital curation*, v. 8, n. 1, pp. 66-83.
https://doi.org/10.2218/ijdc.v8i1.242

Kim, Jeonghyun; **Angnakoon, Putthachat** (2016). "Research using job advertisements: A methodological assessment". *Library and information science research*, v. 4, n. 38, pp. 327-335.
https://doi.org/10.1016/j.lisr.2016.11.006

Lima, Eliane; **Ferreira, Emanuelle**; **Abreu, Flávia**; **De-Lima, Gracirlei**; **Araújo, Carlos-Alberto** (2017). "Profissionais da informação: conceitos, competências e mercado de trabalho". Em: *Encontro nacional de pesquisa em ciência da informação*, *XVIII Enancib*.
http://www.brapci.inf.br/index.php/res/v/105233

Mendes-Dias, Raquel (1997). "Inteligência artificial: sistemas especialistas no gerenciamento da informação". *Ciência da informação*, v. 26, n. 1.
https://doi.org/10.1590/S0100-19651997000100006

Montalli, Katia-Maria (1997). "Perfil do profissional da informação tecnológico e empresarial". *Ciência da informação*, v. 26, n. 3, pp. 290-295.
https://doi.org/10.1590/S0100-19651997000300010

Moreiro-González, José-Antonio (2018). "Actuación profesional en ambientes digitales y formación en ciencia de la información". *Convergências em ciência da informação*, v. 1, n. 1, pp. 3-25.
https://doi.org/10.33467/conci.v1i1.9344

Moreiro-González, José-Antonio; **Vergueiro, Waldomiro**; **Sánchez-Cuadrado, Sonia** (2012). "Análise do contexto de emprego dos profissionais brasileiros da informação-documentação a partir de ofertas de trabalho na Web feitas por empresas e instituições". *Informação & sociedade: estudos*, v. 22, n. 1, pp. 67-78.
http://www.periodicos.ufpb.br/index.php/ies/article/view/9747/7361

Moreiro-González, José-Antonio; **Vergueiro, Waldomiro** (2012). "Ofertas de trabalho na Web para os profissionais brasileiros da informação-documentação: análise das competências e habilidades exigidas pelas empresas e instituições". *Perspectivas em ciência da informação*, v. 17, n. 1, pp. 231-250.
https://e-archivo.uc3m.es/handle/10016/19966
https://doi.org/10.1590/S1413-99362012000100013

Nielsen, Jordan M. (2013). "The blended business librarian: Technology skills in academic business librarian job advertisements". *Journal of business & finance librarianship*, v. 18, n. 2, pp. 119-128.
https://doi.org/10.1080/08963568.2013.768849

Okamoto, Karen; **Polger, Mark** (2012). "Off to market we go: A content analysis of marketing and promotion skills in academic librarian job ads". *Library leadership and management*, v. 26, n. 2, pp. 1-20.
https://academicworks.cuny.edu/jj_pubs/6

Orme, Verity (2008). "You will be …: A study of job advertisements to determine employers' requirements for LIS professionals in the UK in 2007". *Library review*, v. 57, n. 8, pp. 619-633.
https://doi.org/10.1108/00242530810899595

Paletta, Francisco-Carlos; **Milanesi, Luis** (2016). "Current findings from research on professional librarian skills development and needs in Brazil". *Informação & sociedade*, v. 26, n. 1, pp. 199-209.
http://hdl.handle.net/20.500.11959/brapci/92329

Paletta, Francisco-Carlos; **Moreiro-González, José-Antonio** (2019). "Taxonomia inicial para o vocabulário e as enunciações extraídas de um corpo de editais de concursos públicos para profissionais da informação no Brasil". *Pesquisa brasileira em ciência da informação e biblioteconomia*, v. 14, n. 4, pp. 11-35.
https://periodicos.ufpb.br/ojs/index.php/pbcib/article/view/49242

Poll, Roswitha (2001). "Performance indicators for the digital library". *Liber quarterly*, v. 11, n. 3, pp. 244-258.
https://dspace.library.uu.nl/handle/1874/241256

Rebmann, Kristen; **Molitor, Simone**; **Rainey, Bonnie** (2012). "Distance learning skills and responsibilities: A content analysis of job announcements 1996-2010". *Journal of library & information services in distance learning*, v. 6, n. 2, pp. 100-116.
https://doi.org/10.1080/1533290X.2012.693904

Rosseto, Marcia (2008). "Bibliotecas digitais. Cenário e perspectivas". *Revista brasileira de biblioteconomia e documentação*, Nova série, v. 4, n. 1, pp. 101-130.
https://febab.emnuvens.com.br/rbbd/article/view/101/92

Reyes, Alexandra; **Barreto, Catarina**; **Cerdeirinha, João**; **Guedes, Maria-de-Sá**; **Teixeira, Pedro**; **Néo, Sofia** (2017). "Gestor e curador da informação: tendências, perfis e estratégias de reconhecimento". *Páginas A&B, Arquivos e bibliotecas*, n. 7, pp. 3-15.
https://ojs.letras.up.pt/ojs/index.php/paginasaeb/article/viewFile/2835/2592

Salton, Gerald (1970). "Automatic text analysis". *Science*, v. 168, n. 3929, pp. 335-343.
https://www.jstor.org/stable/1728311
https://doi.org/10.2307/1728311

Sayão, Luis-Fernando; **Marcondes, Carlos-Henrique** (2008). "O desafio da interoperabilidade e as novas perspectivas para as bibliotecas digitais". *Transinformação*, v. 20, n. 2, pp. 133-148.
https://www.redalyc.org/pdf/3843/384334798002.pdf

Semeler, Alexandre; **Pinto, Adilson-Luiz**; **Rozados, Helen-Beatriz** (2019). "Data science in data librarianship: Core competencies of a data librarian". *Journal of librarianship and information science*, v. 51, n. 3, pp. 771-780.
https://doi.org/10.1177/0961000617742465

Shahbazi, Rahim; **Hedayati, Aziz** (2016). "Identifying digital librarian competencies according to the analysis of newly emerging IT-based LIS jobs in 2013". *The journal of academic librarianship*, v. 42, n. 5, pp. 542-550.
https://doi.org/10.1016/j.acalib.2016.06.014

Shera, Jesse; **Cleveland, Donald** (1977). "History and foundations of information science". *Annual review of information science and technology*, v. 12, pp. 249-275.

Sood, Samjay; **Owley, Sara**; **Hammond, Kristian**; **Birnbaum, Larry** (2007). "TagAssist: Automatic tag suggestion for blog posts)". Em: *Proceedings of International conference on weblogs and social media (Icwsm)*, March 26-38.
https://www.icwsm.org/papers/2--Sood-Owsley-Hammond-Birnbaum.pdf

Tam, Lawrence; **Robertson, Averil** (2002). "Managing change: libraries and information services in the digital age". *Library management*, v. 23, n. 8-9, pp. 369-377.
https://doi.org/10.1108/01435120210439843

Tarapanov, Kira (1997). *Perfil do profissional da informação no Brasil*. Brasília: IEL.

Tejada-Artigas, Carlos; **Chacón-Jarén, Sandra**; **Moreiro-González, José-Antonio** (2014). "Mercado de trabajo en información y documentación y crisis económica en España: una aproximación a partir de las ofertas publicadas en *IweTel* entre 2008 y 2013". *BiD: textos universitaris de biblioteconomia i documentació*, v. 32, n. 7.
https://doi.org/10.1344/BiD2014.32.15

Tomaél, Maria-Inês; **Alvarenga, Georfravia** (2000). "Profissional da informação: seu espaço e atuação em empresas industriais". *Perspectivas em ciência da informação*, v. 5, n. 1, pp. 81-90.
https://www.brapci.inf.br/_repositorio/2010/11/pdf_e238502b5a_0012713.pdf

Tzoc, Elias; **Millard, John** (2011). "Technical skills for new digital librarians". *Library hi tech news*, v. 28, n. 8, pp. 11-15.
https://doi.org/10.1108/07419051111187851

Vial, Gregory (2019). "Understanding digital transformation: a review and a research agenda". *The journal of strategic information systems*, v. 4, n. 3, pp. 118-144.
https://doi.org/10.1016/j.jsis.2019.01.003

Vieira-da-Cunha, Miriam (2009). "The information professional's profile: an analysis of Brazilian job vacancies on the internet". *Information research*, v. 14, n. 3.
http://informationr.net/ir/14-3/paper407.html

White, Martin (2012). "Digital workplaces: Vision and reality". *Business information review*, v. 29, n. 4, pp. 205-214.
https://doi.org/10.1177/0266382112470412

Digital news on public libraries: Media mapping and thematic and consumption analysis based on *Facebook* interactions

Pedro Lázaro-Rodríguez

Nota: Este artículo se puede leer en español en:
https://revista.profesionaldelainformacion.com/index.php/EPI/article/view/81854

How to cite this article:

Lázaro-Rodríguez, Pedro (2021). "Digital news on public libraries: Media mapping and thematic and consumption analysis based on *Facebook* interactions". *Profesional de la información*, v. 30, n. 1, e300115.

https://doi.org/10.3145/epi.2021.ene.15

Manuscript received on 7th July 2020
Accepted on 17th September 2020

Pedro Lázaro-Rodríguez
https://orcid.org/0000-0002-8756-0507

Universidad Internacional de La Rioja
Facultad de Educación y Facultad de Ciencias Sociales y Humanidades
Gran Vía Rey Juan Carlos I, 41
26002 Logroño, España
pedro.lazaro@unir.net

Abstract

A study of digital news on public libraries is presented through media mapping and a thematic and consumption analysis based on *Facebook* interactions. A total of 7,629 digital news items published in 2019 have been considered. The media mapping includes the evolution of the volume of news publications, the most prominent media outlets and journalists, and the sections in which most news items are published. For the thematic and consumption analysis, the top 250 news items with the highest number of *Facebook* interactions are considered, defining 15 thematic categories. The most published topics include: new libraries and spaces, collections, and libraries from a historical perspective. The topics that generate the most interactions are the value of libraries (social, human, and cultural capital), libraries from other countries, and new libraries and spaces. The value and originality of the current study lie in the measurement of the consumption of news and digital media through *Facebook* interactions. The methods used and results obtained also provide new knowledge for the disciplines of Communication and Media Studies by developing the idea of media mapping for its application to other topics and media in future work, as well as for Librarianship, particularly the information obtained on public libraries.

Keywords

Digital media; Public libraries; Facebook; Value of libraries; Media mapping; Social networks; Press; Media; Thematic analysis; Consumption analysis.

1. Introduction and background

The importance of public libraries is understood in terms of the benefits that they bring to both society and people, therefore enhancing social, human, and cultural capital. The communicative dimension of libraries is of special importance in regard to the interaction with people. This is confirmed by **Gallo-León** and **Quílez-Simón** (2020) in their work on public libraries as they communicate activities with society.

Among the channels and media platforms most widely used by public libraries for communication purposes, social media stands out, as reflected in research on this subject. **Lázaro-Rodríguez** (2020c) based on **Thelwall** (2020) writes, beyond research on libraries, about how research on Twitter is more highly developed due to the accessible nature of tweets through free public application programming interfaces (APIs), as well as its widespread use and the familiarity of many Western researchers with this application. Therefore, focusing on other networks such as *Facebook* can be considered original and of value in studies on public libraries. For example,

- **Carlsson** (2012) explores the use of *Facebook* by public libraries from the perspective of participatory cultures and literacy.
- **Neo** and **Calvert** (2012) analyze the adoption of social media by libraries in New Zealand.
- **Grgic** and **Mucnjak** (2017) carried out a comparative study of Croatian and Irish public libraries' activity on *Facebook*, focusing on their main usage trends and their interaction with users. Similar work has been carried out on libraries in Brazil (**Calil-Junior**; **Almendra**, 2016) and the USA (**Joo**; **Choi**; **Baek**, 2018).

Other studies focus on the methodological aspects and research topics on *Facebook* and libraries.

- **Carlsson** (2015) defines general trends, shortfalls, and opportunities, suggesting possibilities for future research.
- **Alvim** and **Calixto** (2016) develop a content analysis model for the study of the social mission of the public library on *Facebook*.
- **Lund** (2019) focuses on the analysis of the correlation between the number of followers on public libraries' *Facebook* pages and their usage, finding a moderate correlation between followers and visits but a strong correlation between followers and attendance at events.
- **Mathiasson** and **Jochumsen** (2019) present a new research approach focused on public library programming through events on *Facebook*.
- **Lastly**, **Joo**, **Lu**, and **Lee** (2020) develop a content analysis based on text mining of themes, user participation, and features of libraries on social media.

Within the Spanish sphere, the review carried out by **Gallo-León** and **Quílez-Simón** (2020) is relevant and presents some examples of studies on *Facebook* and public libraries in Spain, in addition to the work itself. The ideas of **Arroyo-Vázquez** (2014) are also relevant, as it can be said that, in general although with some exceptions, libraries do not understand how to take advantage of the opportunities that *Facebook* offers. Indeed, the need for public libraries in Spain to establish a presence on *Facebook* was already defended by **García-Giménez** (2010). Other authors, such as **Cebolla-Talens** (2015), focus on a descriptive analysis of the different social media networks used by the *Valencian Public Reading Network* and their motivations for using them. Finally, **Ortigosa-Delgado** (2017) analyzes the presence and relevance of the *Arroyo de la Miel Public Library* in the local, provincial, and national press, to detect aspects of the production of information promoted by the institution.

All the above-cited work refers to libraries as being leading protagonists in a generation of communication. However, other research areas also exist, such as the study of the dissemination of news about libraries by the media:

- **Martin-Da-Silva** and **De-Almeida-Ferreira** (2006) propose a study on the promotion of reading and libraries in the Brazilian environment.
- **Yu** and **Chen** (2016) analyze the link between libraries and digital news with the aim of increasing their visibility and promoting the consumption of information about libraries.
- **Singh** *et al*. (2020) focus on the gender bias of the library profession in digital media, including in the electronic version of *The New York Times.*

Research on public libraries in the media has also been developed within the Spanish context; For example, **García-Delgado** (2013) analyzes the public discourse on reading included in *El País* news, comparing it with other newspapers such as *El mundo* and *ABC*. News about Spanish libraries in *El país* and *El mundo* was also analyzed by **Galluzzi** (2014; 2015).[1] These works are of particular interest because they are carried out within a comparative framework with other European countries such as Italy, France, and the UK. The author proposes a thematic analysis, defining a total of 13 categories for the analyzed news articles and analyzing the most published topics. Lastly, **Lázaro-Rodríguez**, **López-Gijón**, and **Herrera-Viedma** (2018) analyze the presence of public libraries and reading in Spanish media compared with other cultural activities such as cinemas, museums, and theaters. The authors relate the results to the use of public libraries, reflecting on the need for a positive feedback process between public libraries and reading, librarianship and documentation, politics, and the media.

Regarding the use of the Internet and *Facebook* in Spain, according to *Spain's National Institute of Statistics* (*INE*), in 2019, 90.7% of the population had used the Internet within the last three months (*INE*, 2019). A total of 64.6% of internet users had used general social media such as *Facebook*, *Twitter*, and *YouTube* in the last three months. According to the *Center for Sociological Research* (*CIS*), *Facebook* has the highest percentage of people with accounts, ahead of other social media such as *Instagram* or *Twitter* (*CIS*, 2020). The popular use of *Facebook* in Spain is also corroborated by scientific literature (**Callejo-Gallego**; **Agudo-Arroyo**, 2019), as well as its use globally (**Thelwall**, 2020).

Regarding the social media platforms used by libraries at a global level, the *WebJunction* survey (2018) can be mentioned. The results indicate a higher frequency of posts on *Facebook* and *Twitter*, with content mainly concerning events, images of the libraries themselves, and information about the services offered. Although this refers to all the different types of library, it should be noted that public libraries constitute 72% of those considered. The

> The topics on which it is published the most refer to new libraries (new spaces and services), the collection, and libraries from a historical point of view

collection of data on the use of social networks such as *Facebook*, *Instagram*, *Twitter*, and *WhatsApp* by public libraries in Spain in the Fesabid report on public libraries in Spain, and their diagnosis after the economic crisis (**Arroyo-Vázquez**; **Hernández-Sánchez**; **Gómez-Hernández**, 2019), is considered to be deficient and limited, representing a global challenge. The authors therefore propose that the official indicators used in that study should be reconsidered to include some novel indicators that offer information in this regard.

However, the scientific literature on the subject in Spain includes studies on the presence on and use of social media by public libraries in specific regions. For example, **Sánchez-García** (2012) concluded that Malaga's public libraries had a low presence on social media, but their most used platform was *Facebook*, followed by *Twitter*, *Blogger*, and *LinkedIn*. Similarly, **Vallet-Sanmanuel** (2017) found that the social media platforms most widely used by public libraries in Valencia were also *Facebook* and *Twitter*.

Given the three main topics on public libraries described above, a focus on *Facebook* and the media can be considered to represent an original research area for libraries. This includes an analysis of news about public libraries in digital media, considering interactions on *Facebook* (shares, comments, and reactions) as a measure of their consumption. This is precisely what is proposed herein. This study focuses on digital news from 2019, as this is the most recent year, excluding the year 2020 due to the health crisis caused by Covid-19 being the major protagonist within digital news (**Lázaro-Rodríguez**, 2020b). In relation to interactions on *Facebook* as a measure of digital media news consumption, another recent work by the author serves as a reference (**Lázaro-Rodríguez**, 2020c).

The main objective of this study is to analyze digital news about public libraries in Spain. To achieve this, media mapping is carried out to analyze the volume of news published, the media and journalists that publish the most, and the sections in which they are most disseminated. Secondly, the news is analyzed by defining thematic categories studying the most frequent category news published in, and identifying the most consumed news and categories, considering interactions on *Facebook* (shares, comments, and reactions) as a measure of said consumption.

2. Materials and methodology

The *My News*[2] database was used to retrieve digital news about public libraries in Spain. This database has been used in many scientific works. Due to the thematic affinity of their work, we must mention **Lázaro-Rodríguez**, **López-Gijón**, and **Herrera-Viedma** (2018), whose article has already been discussed in the "Introduction and background" section above. The news search was planned with the intention of being as exhaustive as possible but without losing precision. The search was designed to retrieve news items with the concept of 'libraries' in the title, as well as items written in the different languages used in Spain. A first criterion was included in the original equation to automate the elimination of news items that alluded to school and university libraries, while confirming that it was not possible for them to be related to public libraries. The following equation was used:

> ("library" OR "libraries" OR "liburutegi" OR "liburutegiak" OR "biblioteques" NOT ("university library" "university libraries" "universitaries libraries" "crai" "university library" "university libraries" "biblioteques de la universitat" "school library" "school libraries" "school libraries" "eskolako liburutegi" "eskola liburutegiak"))&xoptions = contentfields = title: subtitle

The defined time window was from 1 January 2019 to 31 December of the same year, and the news retrieval was carried out on 19 June 2020. Filters were used to retrieve news from digital media and those included in media with local, regional, and national geographic scope. The search was divided to retrieve digital news for each month separately. It should be mentioned in this regard that, based on a primary exploratory exercise, some slight inconsistencies were detected in the database in terms of total news. When running a search for the year 2019 in its entirety, the total number of results differs from that retrieved by months, compared with the total sum. Furthermore, after exporting the news to a spreadsheet format, it was detected that some news items in the database results appeared in different months compared with the actual month in which they were published. For this reason, we decided to export the results of the searches by months, and then sort the news by date in the spreadsheet.

After obtaining the results, a manual cleaning of news items that did not refer to public libraries was also carried out, including those referring to university libraries in which the initials of the universities were written or news about specialized libraries such as military or private libraries. On the other hand, news referring to ancient libraries was not eliminated due to their relationship with the history of public libraries in general. It is equally important to emphasize that the news items recovered and analyzed in this study do not refer only to public libraries in Spain, but also to libraries in other countries. This is due to the fact that the analysis of news about public libraries within digital media in Spain may include news about libraries in other places. Finally, the results also included 15 news stories without URLs, all of which were eliminated because this study focused on digital news.

Table 1 presents the number of news items retrieved using the applied search equation, those eliminated after manual cleaning, and the total number of valid news items considered in this study.

Table 1. Total news items considered

	Based on the equation	Manually removed	Total considered
News items	8,389	760	7,629

Regarding *Facebook* interactions, in order to obtain the total number of interactions, the *SharedCount* program (*SharedCount*, 2020) was used, including the news items' URLs retrieved from the *My News* search engine. This program was also applied by **Lázaro-Rodríguez** (2020c) in his work on two digital-native Spanish media outlets, which includes a broader review of other works that use it. It should be noted that the interactions were calculated and retrieved on 20 June 2020, between 15:00 p.m. and 16:00 p.m.

Having retrieved the news from *My News* and the *Facebook* interactions from *SharedCount*, the data were processed using basic descriptive statistical methods. For the media mapping, the evolution of news was obtained based on months, the media and authors (journalists) who publish the most, and the most published sections. For the thematic and consumption analysis, the news items with the highest amount of *Facebook* interactions were obtained both individually and by categories as defined by a thematic analysis based on the work of **Galluzzi** (2014).

The news data have been made available in a project in the *Open Science Framework* (*OSF*) for consultation (to maintain anonymity in the review of the work, the link to the project will be attached after the review, now available in an attached spreadsheet to review).
https://osf.io/b3p7r

These data include,

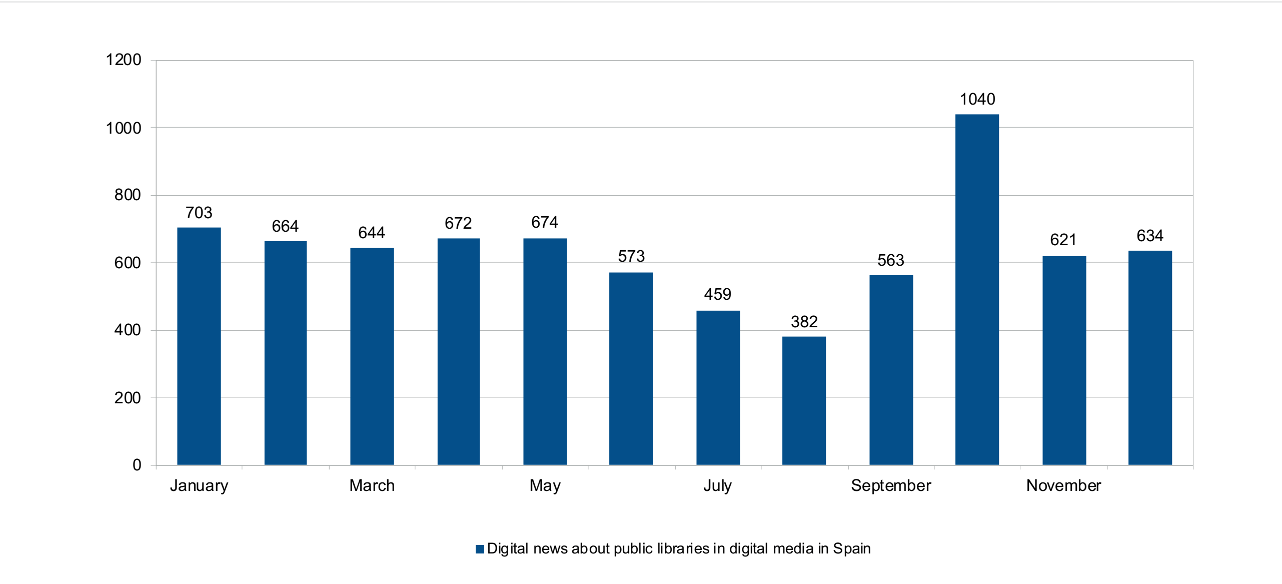
- the URLs of the news items, publication dates, news outlets, journalists, sections,
- *Facebook* interactions (shares, comments, reactions, and total reactions), and
- categories assigned to the first 250 stories with the highest number of *Facebook* interactions (used later in the study).

3. Results and discussion

3.1. Media mapping

Graph 1 shows the evolution of the publication of news about public libraries in digital media in Spain. With the exceptions of June, July, August, and September, which coincide with holiday periods and reduced hours, as well as the month of October, the volume of news items per month is quite homogeneous, hovering around 650 per month. The case of October, with 1,040 news items published in one month, may attract attention at first as the number is almost double that of other months, with the exception of the summer period. However, the number can be explained by Libraries Day in Spain on 24 October, which was promoted in news and analyzed media. The same cannot be said for International Book Day on 23 April.

Regarding the analysis of the media outlets with the most news items published, it should first be noted that a total of 251 different media outlets were identified. The top 20 media outlets with the most news items published are presented in Table 2.



Graph 1. Evolution of news publication by month

The media outlet with the most news items published was *europapress.es*, even more so if the news items from *europapress.es/epsocial.aspx* are taken into account as well. Among the top 20 outlets, some national ones stand out, such as *gentedigital.es*, *20minutos.es*, *abc.es*, and *eldiario.es*. Some radio news outlets are also detected, such as *cadenaser.com*. However, news outlets at the regional, provincial, and local level of Spanish autonomous communities predominate, such as Galicia with two media outlets, *lavozdegalicia.es* and *farodevigo.es*, Extremadura with *elperiodicoextremadura.com* and *hoy.es*, and Castilla–La Mancha with *lanzadigital.com* and *eldiadigital.es*. Catalonia is present with one media outlet, *elperiodic.com*, as well as the Basque Country with *diariovasco.com*, Andalusia with *teleprensa.com*, Castilla y León with *diariodesalamanca.es*, Asturias with *elcomerciodigital.com*, the Chartered Community of Navarra with *noticiasdenavarra.es*, and La Rioja with *larioja.com*.

Table 2. The top 20 media outlets that published the most news items

Media outlet	News items	Media outlet	News items
europapress.es	516	*lanzadigital.com*	156
gentedigital.es	353	*diariovasco.com*	134
europapress.es/epsocial.aspx	337	*elperiodicoextremadura.com*	127
20minutos.es	300	*hoy.es*	113
lavozdegalicia.es	269	*diariodesalamanca.es*	112
farodevigo.es	267	*elcomerciodigital.com*	104
abc.es	235	*eldiario.es*	104
elperiodic.com	186	*eldiadigital.es*	96
cadenaser.com	185	*noticiasdenavarra.es*	92
teleprensa.com	158	*larioja.com*	89

Note: *europapress.es* and *europapress.es/epsocial.aspx* have been labeled separately because they are different web portals classified in this way by *My News*.

A total of 170 sections in which news items were published were identified. The top 20 sections with the most news are presented in Table 3.

Table 3. The top 20 sections in which the most news was published

Section	News items	Section	News items
Local	1,417	Society	111
Current/latest news	1,368	Economy	89
Autonomous communities and provinces	1,059	Culture and entertainment	86
Regional	943	Opinions	54
Culture	396	Users - opinions	51
Calendars	366	Books/literature	46
Radio/television	250	Politics	40
Multimedia/music/video	245	Press agencies	39
County	151	Radio/television – autonomous Communities and provinces	35
National	146	Communication – confidential	33

The section in which most news items were published was “Local” (1,417), which makes a lot of sense if one takes into account the fact that public libraries in Spain are mostly locally owned. If we look at the information for the number of publicly owned libraries on the website of *Spanish public libraries in figures* from the *Ministry of Culture and Sport* (*MCD*), it is verified that, in 2017 (the last year with available data), 4,474 public libraries out of 4,600 in total depended on their local administration, representing 97.26% (*MCD*, 2020a).

If we do not consider the sections referring to geographical area such as “Autonomous communities and provinces” (1.059 news items), “Regional” (943), “County” (151), or “National” (146), the results highlight the sections of “Culture” (396), “Calendars” (366), and “Radio/Television” (250). Meanwhile, the other results by sections offer a primary thematic map of news publication about public libraries, relating to culture in general (“Culture,” “Culture and entertainment,” and “Books/literature” section), cultural activity and exhibitions in particular (“Calendars,” and again in “Culture and entertainment”), radio, musical and visual content, and digital content (“Radio/television,” “Multimedia/music/video,” “Radio/television – autonomous communities and provinces”, “Communication - confidential”, and “Users – opinions”), as well as others related to the political and economic dimension (“Economy” and “Politics”). That is, in the publication of news about public libraries, issues related to culture, new content in formats beyond the classic book, and issues on economics and politics are detected as protagonists.

Regarding the authorship of the news, it should be noted that only 1,071 of the 7,629 analyzed news items appear with at least one personal signature, representing 14.04% of the total. As for unique journalists, after the normalization of some names that appeared with initials but without referring to the actual person, a total of 627 were identified. The top 20 journalists who publish the most digital news about public libraries are presented in Table 4.

> Isabel Andrés and Laura Grau are the journalists who publish the most about public libraries

Table 4. Top 20 journalists who publish the most news articles (cut number = 6)

Journalist	News	Journalist	News
Isabel Andrés	20	Pedro Zaballos	8
Laura Grau	13	Blas Fernández	7
Álvaro Soto	11	Luisa María Sánchez Ballesteros	7
Daniel Roldán	11	Mari Carmen González Vázquez	7
Rosa Díaz	11	Alex De Matías	6
Alberto Iglesias Fraga	10	David García	6
Israel Aránguez	10	Inmaculada Acién	6
David Rodríguez	9	Isabel Leña	6
Francisco Navarro	8	Lola González	6
Lorena Japón	8	Xosé Gago	6
Paco Núñez	8	-	-

The journalist with the most published news is Isabel Andrés with 20 items, followed by Laura Grau with 13. If you look at the news retrieved from *My News* and included in the *OSF* project, Isabel Andrés publishes in the media outlet named *tribunasalamanca.com* and Laura Grau in *laveu.cat*. Álvaro Soto, Daniel Roldán, and Rosa Díaz appear with 11 news items each. The first two publish in various media with diverse geographical scope, such as *elcomerciodigital.com*, *diariovasco.com*, *elcorreo.com*, *nortecastilla.es*, *ideal.es*, or *larioja.com*, while Rosa Díaz does so in *lavozdealmeria.es*. If the gender variable is considered, among the top 20 journalists who publish the most about public libraries, it should be noted that 9 out of 20 journalists are women, which represents 45% of the total, with 84 news items, which is 47.19% of the total of 178. These results allow us to conclude that gender parity is very close to being proportionate, being close to 50%.

3.2. Thematic and consumption analysis based on *Facebook* interactions

In this study, *Facebook* interactions are considered as the sum of analyzed shares, comments, and reactions to digital news. Although these variables differ, as a positive reaction is not the same as a negative one, they all imply an interaction between the news and users on *Facebook*. The total number of shares, comments, reactions, and interactions, along with the percentage of the first three variables with respect to the last, are presented in Table 5.

Table 5. Total interactions on *Facebook* and percentage by type

	Shares	Comments	Reactions	Interactions
Total news items (7629)	115,725	24,145	267,870	407,740
% interactions	28.38%	5.92%	65.70%	100%

The interactions add up to 407,740. An interesting result is that digital news about public libraries generates more reactions than shares or comments. Specifically, 65.70% of the interactions are reactions, followed by 28.38% being shares. These two variables consist of clicking options in the social network to add a type of reaction or spread a news item among profiles or users. The percentage of comments with respect to the total interactions (5.92%) is low. If it is accepted that comments involve a more "active" interaction than shares and reactions —as they include writing or adding new information to a given news item rather than simply clicking on options provided by the social network— the interactions with news about public libraries occur in a more passive than active way. However, shares and reactions also imply activity and opinion on the part of users.

Because of the large number of news items analyzed in this study (7,629), for the thematic and consumption analysis, the decision was made to consider the 250 news items with the most *Facebook* interactions. This decision was based on recent work (**Lázaro-Rodríguez**, 2020c) showing that the shares, comments, reactions, and therefore total interactions generated represent around 80% of the total for each variable (Table 6).

Table 6. Percentage of interactions for the top 250 news articles

News set	Shares	Comments	Reactions	Interactions
Top 250 interactions	92,237	19,716	209,327	321,280
Total (7,629)	115,725	24,145	267,870	407,740
% top 250/total	79.70%	81.66%	78.14%	78.80%

The top 10 news articles with the most interactions are presented in Table 7.

Table 7. Top 10 news articles with the most interactions

Title	Date	Media outlet	Interactions
Unified management of libraries	04/07/19	*gencat.cat*	33,711
PP and *C's* cut in schools and libraries to pay banks in Zaragoza	24/09/19	*publico.es*	23,527
Book returned to the library 82 years after loan	23/05/19	*lavanguardia.es*	17224
The *Mio Cid codex* leaves the vault of the *National Library*	04/06/19	*lavanguardia.es*	9,767
A lost manuscript of the library of Ferdinand Colombus, son of the discoverer, found in Copenhague	01/04/19	*abc.es*	9,343
An instrument library	09/05/19	*deia.com*	8,327
The 200 literary treasures recovered by a library in Bolivia	22/06/19	*elpais.com*	8,159
Library and courses move to a walk-in center	25/01/19	*deia.com*	8,116
The adorable mobile library that brings culture to Italian children without access to books	18/04/19	*elcomerciodigi-tal.com*	7,512
The popular libraries of Argentina, seeds of the reading nation	13/05/19	*elpais.com*	7,033

The news item with the largest number of interactions, and therefore the one that generated the most consumption, was entitled "Unified management of libraries." It was published by *gencat.cat* on 4 July 2019. Its URL leads to a press release on the testing phase of a collective catalog (*govern.cat*, 2019). Thus, the news that generated the most interactions was about Catalan library management. These results prove the appropriateness of the search equation used, including the retrieval of news about libraries in different languages used in Spain.
The second news item in the top 10 is also striking. It is entitled "*PP* and *C's* cut in schools and libraries to pay the bank in Zaragoza" and was published by *publico.es* on 24 September 2019. It refers to cuts by the *Partido Popular* and *Ciudadanos* in the libraries of Zaragoza. The relationship between political parties and Spanish public libraries has been explored in various scientific works; for example, **Sánchez-Sánchez** (1994) analyzed library policies in electoral programs between 1977 and 1993. **Parker** *et al.*, (2017) did the same in the electoral programs of the autonomous community of Castilla–La Mancha for the municipal elections from 2007 to 2015, concluding that the *PSOE* offered the largest number of library-related proposals.

Other works published in the form of a website or blog post allow us to suggest that public libraries have greater presence in the electoral programs of left-wing parties, and not so much in those of the Right (**Lázaro-Rodríguez**, 2020a; **Marquina**, 2020). Both authors proposed an analysis of the presence of libraries in the electoral programs of *Ciudadanos*, *Unidos Podemos* (*IU* and *Podemos*), *PP*, and the *PSOE* for the general elections of 2015 and 2016. While the *PP* only referred to libraries to provide them with connectivity and ultra-fast Internet connection, parties such as the *IU* developed up to seven points that even included training in values for library staff and the expansion of collections with funds related to feminism and the LGBTI collective.

However, due to the fact that almost all public libraries are locally owned, it is difficult to make general statements regarding the relationship between better libraries and left-wing governments or political municipalities, due to the existence of counterexamples with right-wing governments or city councils where libraries function at the same qualitative level. Given that public libraries are not only for reading, the identification of specific cases as counterexamples can be considered by analyzing the prizes awarded in the *María Moliner Campaign* to encourage reading within the *MCD Reading Promotion Plan* (*MCD*, 2020b). The list of winners for the different years includes libraries located in localities with diverse political governments. A wider analysis focusing on which public libraries in which localities are the winners in these types of announcements and awards, taking into account the governments and political parties of said localities, could be considered in future work.

Regarding the other news items in the top 10 by *Facebook* interactions, news about libraries in other countries and related to history, exhibitions, the library and its functions, and various events are identified. Based on, an analysis of the top 250 news items by category can be considered.
As a reference, **Galluzzi** (2014) defined 13 categories for the analysis of news about libraries in different media outlets from four European countries, including Spain, with *El mundo* and *El país*.[3] In this study, 15 categories have been defined from the analysis of the top 250 news items by *Facebook* interactions, taking **Galluzzi** (2014) as an example. The 15 categories defined and the related content are presented in Table 8.

> The news item with the highest number of interactions on *Facebook* is entitled "Unified management of libraries" and was published by *gencat.cat*; the second was published by *publico.es* with the title "*PP* and *C's* cut in schools and libraries to pay banks in Zaragoza"

Table 8. Thematic and content-based categories

Category	Related content
Cultural activities	Cultural activities and exhibitions
Spaces	Buildings, services, equipment, and spaces
Library closures	Library closures, budget, and schedule cuts
Collection	Collections, acquisitions, donations, management, and library cooperation
Gender	Gender, libraries with a collection on women's studies
History	Historical, classical, and ancient libraries
Tributes and events	Tributes, awards, library days, obituaries, anecdotes, events, and book burning
International	Libraries in other countries
Children and students	Children, students, schools, secondary schools, and training
New libraries	New libraries, new spaces, new services, and mobile libraries
Staff	Working staff of libraries
Politics	Politics, political parties, library laws, and censorship
Digital services	Digital content, web, and video games
Usage	Library use, users, loans, visits, budget, and statistics
Value of libraries	Cultural capital, social capital, human capital, and the value of libraries

The distribution of categories ordered by the number of news items together with their percentages is presented in Table 9.

The category with the highest number of news items is new libraries with 62 (16.36%) items. This category focuses on news about new libraries, new spaces, and new services. Also noteworthy are the categories of collections (acquisitions, donations, library management, and cooperation), with 44 news items (11.61%), history with 39 items (10.29%), the value of libraries (cultural capital, social capital, and human capital) with 38 items (10.03%), and tributes and events (awards, library day, obituaries, anecdotes, etc.) with 36 items (9.50%).

Given that many of the categories defined in this study are based on those proposed by **Galluzzi** (2014) in his analysis of news in *El país* and *El mundo* about libraries in general (not only public ones), the results of the current study and those of that author can be related. In the case of the cited author, the category with the highest number of news items was new libraries and new buildings, as in the current study. The group of categories with the greatest number of news items identified by the cited author also included services and users, conservation, heritage, and catalogs, as well as one called mission and papers. Similar categories among those with the most news were identified in the current study. This is the case of those referring to collections (the category with the second most news items) and the value of libraries (fourth in terms of news items).

Table 9. Thematic categories ordered by the number of news items

Position	Category	News	Percentage
1	New libraries	62	16.36
2	Collection	44	11.61
3	History	39	10.29
4	Value of libraries	38	10.03
5	Tributes and events	36	9.50
6	Cultural activities	27	7.12
7	International	24	6.33
8	Library closures	23	6.07
9	Spaces	21	5.54
10	Usage	20	5.28
11	Staff	12	3.17
11	Politics	12	3.17
12	Children and students	9	2.37
13	Gender	7	1.85
14	Digital services	5	1.32
-	Total	379	100

Note: The total number of news items by category (379) differs from the total of 250 news items analyzed because each news item can belong to more than one category. That is, there are news items with more than one category assigned to them, increasing the total of number of categories assigned to 379 from 250 news articles.

Despite the similarities between the results of the two compared studies, differences are also detected. In **Galluzzi** (2014), the categories of policy, strategy, and management, library closures and budget cuts, and that of digitization and digital libraries are among the seven categories with the most news items. However, in the current work, the category of politics appears in position 11 out of 14 (although there are 15 categories, two of them share the 11th position as shown in Table 9 and therefore there are 14 positions), library closures at position 9, and digital services in last place.

The next step is an analysis of the distribution of news by categories according to their consumption and interactions generated on *Facebook*. Table 10 presents the categories ordered by the number of interactions together with their percentage.

These results can be interpreted as indicating the public library topics that attracted the most consumption and interest. These are related to the value of libraries (cultural capital, social capital, and human capital) with 92,540 interactions (14.27%), libraries in other countries with 78,341 (12.08%), new libraries (new spaces and new services) with 69,786 interactions (10.76%), history with 67,371 (10.39%), and collections (acquisitions, donations, management, and library cooperation) with 61,886 interactions (9.54%).

Considering the results presented in Tables 9 and 10, the categories that include the highest amount of articles published can be analyzed to determine whether they are also those that generate the most interactions on *Facebook*. For this, a linear relationship between the variables can be studied, considering the relationship between either the number of news items and their interactions, or the positions of each category in each table. Table 11 shows the results for the Pearson linear correlation coefficient used to analyze the former relationship when the variables follow a normal distribution, together with the results for the Spearman's rho linear correlation coefficient to compare the positions for the second relationship.

Table 10. Thematic categories ordered by interactions

Position	Category	Interactions	Percentage
1	Value of libraries	92,540	14.27
2	International	78,341	12.08
3	New libraries	69,786	10.76
4	History	67,371	10.39
5	Collection	61,886	9.54
6	Tributes and events	57,867	8.92
7	Usage	39,991	6.17
8	Library closures	38,347	5.91
9	Politics	35,168	5.42
10	Cultural activities	30,819	4.75
11	Library as a space	30,279	4.67
12	Children and students	19,001	2.93
13	Staff	15,432	2.38
14	Digital services	8,511	1.31
15	Gender	3,133	0.48
-	Total	648,472	100

Note: As in Table 9, the total number of interactions in this table (648.472) differs from the 321,280 interactions of the top 250 news items in Table 6 because each news item can belong to more than one category; That is, there are news items with more than one category assigned to them, thus increasing the total of interactions when considered by assigned categories (379) rather than by news (250).

Table 11. Relationship between number of news items and their interactions by thematic category

Correlation coefficient	Results
Pearson (between the number of news items versus interactions by category)	0.79*
Spearman's rho (between the category positions of number of news items versus interactions)	0.84*

*$p \leq 0.001$

These results confirm the relationship between the variables on the number of news items per category and for their interactions on *Facebook*, the positive correlation being high, with statistical significance. Therefore, it can be accepted that the categories with the highest number of published news are also the ones that generate the most interactions. News about the value of libraries is the fourth category with the highest number of news stories, after those referring to new libraries, collections, and history, but it is the first category in terms of the number of *Facebook* interactions. On the other hand, the category of libraries from other countries is the seventh category by number of news items, but the second in terms of *Facebook* interactions with 78,341 interactions, representing 12.08%.

4. Conclusions

This article presents media mapping and a thematic and consumption analysis based on *Facebook* interactions. A total of 7,629 digital news items focused on public libraries in Spain published in 2019 were considered. Information was thus obtained on the volume of news published and its evolution, the most prominent media and journalists in the publication of news, the sections of the media in which articles were most published, and the most discussed topics and their *Facebook* interactions.

The volume of news was homogeneous during the year analyzed, excluding the summer months and the peak in October due to the celebration of Libraries Day. Regarding the media, national outlets stand out with more news, but also some regional and local outlets from autonomous communities such as Galicia, Extremadura, and Castilla–La Mancha stand out with more than one outlet among the top 20 with the highest volume of publications. Not counting the media from the *Europapress* news agency, the five media outlets with the most news items published were *gentedigital.es*, *20minutos.es*, *lavozdegalicia.es*, *farodevigo.es*, and *abc.es*.

The topics that generate the most interactions refer to the value of libraries, libraries in other countries and the construction of new libraries and new spaces and services

The primary original contribution of this work is the identification of the journalists who publish the most about public libraries. The concept of media mapping is reminiscent of the bibliometrics discipline of scientific mapping for the evaluation of scientific activity. It is common in this type of mapping to determine the most prominent researchers in a scientific discipline, thus it is considered of equal benefit to know the journalists who publish the most on a topic. Isabel Andrés and Laura Grau are the journalists who publish the most about public libraries. In addition, an analysis of the top 20 authors with the highest amount of published news items revealed results close to parity in terms of publication by gender.

> National outlets stand out with more news, but also stand out some regional and local outlets from autonomous communities such as Galicia, Extremadura, and Castilla–La Mancha

The analysis of media sections can be considered a primary thematic analysis of the news on the subject analyzed. Not counting sections related to the geographical area, the sections with the most publications are focused on culture, agendas (cultural activities and exhibitions), or other media or formats such as radio, music, and video, and the social and economic sections, also related to politics. The fact that the section with the highest number of news is "Local" is related to the ownership of Spanish public libraries, as almost all of their administrations are also local. The fact that the news about Spanish public libraries is not classified mainly into the sections focused on culture does not mean that it is not related to facts about culture. If it is accepted that a good part of the digital media analyzed are of a general theme, the classification of the news they publish can be equally general, and therefore it is not surprising that the section with the most news is "Local." The results obtained could be related to the perception that the media and the general population have of public libraries, and could be developed in future work. In this regard, one must highlight the work of **Fernández-Ardèvol** *et al*. (2018) on how public libraries are seen by nonusers, where it is established that libraries are seen mainly as cultural institutions, as well as places for study.

The thematic and consumption analysis of the news was carried out by defining thematic categories for the top 250 news items with the greatest amount of *Facebook* interactions. Although something similar was already developed in **Galluzzi**'s (2014) work, the difference between this article and that of the cited author is that this article analyzed digital news on public libraries in Spanish media (up to 251 different media outlets were detected), while **Galluzzi** considered libraries in general, without limiting the analysis to public libraries, and his analysis included two specific Spanish media outlets in a comparative context with others in Europe. The results of this study regarding the categories with the highest number of news items coincide in part with those of **Galluzzi** (2014), specifically those referring to new libraries and new buildings, collections, and the value of libraries. However, differences were also identified within the categories related to politics, strategy and management, the closure of libraries and budget cuts, and digitization and digital libraries, which were not so prominent in the news and media analyzed in the current study.

Considering the digital news items, their URLs were used to analyze the interactions generated on *Facebook* as a measure of their consumption. This measure of news consumption is the study's most valuable and original contribution. The results lead to the conclusion that the news items that generate more interactions and consumption are those related to the value of libraries, libraries in other countries, and the construction of new libraries and spaces.

Future work in the discipline of Communication may take this study as a basis for developing mappings of specific media, or in relation to other topics that require some scientific knowledge. Other disciplines, such as Library Science and Documentation, can also use the results obtained in this study to relate them to the reality of Spanish public libraries, specifically, for example, evaluations of where libraries are more visible in the media, the relationship between said visibility and the use of libraries, and the benefits that increased library use can bring to society in general and people in particular.

> One of the most valuable and original contributions of this study is the measurement of news consumption based on interactions on *Facebook*

5. Notes

1. The 2014 Galluzzi's work was published in English as a book chapter including an analysis of media from four countries. His work from 2015 is about the publication of the results referring to the Spanish media in the journal BiD: *universitaris texts de biblioteconomia i documentació.* For this reason, the reference to **Galluzzi** (2014) will be used, but in reference to both works.

2. Access by subscription from the electronic library of the university of the authors.

3. The categories that **Galluzzi** (2014) uses to classify news about libraries are:

- politics/strategy/management
- library closures/budget cuts
- digital/digitisation
- services/users
- conservation/holdings/catalogue

- new libraries/new buildings
- mission/roles
- buildings/architecture
- Internet/ebook/technology
- reading/marketing
- staff/recruitment
- history
- acquisition/open access.

6. References

Alvim, Luisa; **Calixto, José-António** (2016). "Content analysis model to analyze facets of social mission of public library on the Facebook and in the websites". *Qualitative & quantitative methods in libraries*, v. 5, n. 1, pp. 165-176.
http://www.qqml-journal.net/index.php/qqml/article/view/314

Arroyo-Vázquez, Natalia (2014). "Pinchar la burbuja de las bibliotecas en Facebook: el reto de la comunicación". *Anuario ThinkEPI*, v. 8, pp. 111-121.
https://recyt.fecyt.es/index.php/ThinkEPI/article/view/29564

Arroyo-Vázquez, Natalia; **Hernández-Sánchez, Hilario**; **Gómez-Hernández, José-Antonio** (2019). *Las bibliotecas públicas en España: diagnóstico tras la crisis económica. Informe Fesabid*. Madrid: Fesabid. ISBN: 978 84 939694 2 4
http://www.fesabid.org/sites/default/files/repositorio/informe-fesabid-v12-digital.pdf

Calil-Junior, Alberto; **Almendra, Gabriela** (2016). "As apropriações do Facebook pelas bibliotecas públicas estaduais brasileiras". *Em questão*, v. 22, n. 1, pp. 188-213.
https://doi.org/10.19132/1808-5245221.188-213

Callejo-Gallego, Javier; **Agudo-Arroyo, Yolanda** (2019). "Análisis cuantitativo y cualitativo de la audiencia de las cuentas del Estado español en *Facebook* y *Twitter*". *El profesional de la información*, v. 28, n. 5, e280519.
https://doi.org/10.3145/epi.2019.sep.19

Carlsson, Hanna (2012). "Public library *Facebook* use: established positions renegotiated?". In: *Proceedings of the 2012 iConference*, pp. 450-452.
https://doi.org/10.1145/2132176.2132244

Carlsson, Hanna (2015). "Researching public libraries and the social web, 2006-2012". *Journal of documentation*, v. 71, n. 4, pp. 632-649.
https://doi.org/10.1108/JD-03-2014-0046

Cebolla-Talens, Desamparados (2015). "Ús de les xarxes socials a les biblioteques públiques municipals de la Xarxa de Lectura Pública Valenciana (XLPV)". *Métodos de información*, v. 6, n. 10, pp. 5-28.
https://doi.org/10.5557/IIMEI6-N10-005028

CIS (2020). *Barómetro de diciembre 2019. Postelectoral elecciones generales 2019.*
http://www.cis.es/cis/export/sites/default/-Archivos/Marginales/3260_3279/3269/es3269mar.html

Fernández-Ardèvol, Mireia; **Ferran-Ferrer, Núria**; **Nieto-Arroyo, Javier**; **Fenoll, Carme** (2018). "The public library as seen by the non-users". *El profesional de la información*, v. 27, n. 3, pp. 659-670.
https://doi.org/10.3145/epi.2018.may.19

Gallo-León, José-Pablo; **Quílez-Simón, Pedro** (2020). "La biblioteca pública como comunicadora". *Anales de documentación*, v. 23, n. 2.
https://revistas.um.es/analesdoc/article/view/403411

Galluzzi, Anna (2014). "Libraries in the newspapers". En: Galluzzi, Anna. *Libraries and public perception: A comparative analysis of the European press*. Chandos Publishing, pp. 37-95. ISBN: 978 1 84334 744 6
https://doi.org/10.1533/9781780634258.37

Galluzzi, Anna (2015). "Las bibliotecas en la prensa diaria: el caso español". *BiD: textos universitaris de biblioteconomia i documentació*, n. 34.
https://doi.org/10.1344/BiD2015.34.24

García-Delgado, Belén (2013). "Análisis de las noticias sobre lectura publicadas en el periódico *El país* (2004-2010)". *Ibersid: revista de sistemas de información y documentación*, v. 7, pp. 57-63.
https://ibersid.eu/ojs/index.php/ibersid/article/view/4061

García-Giménez, Daniel (2010). "Redes sociales: posibilidades de Facebook para las bibliotecas públicas". *BiD: textos universitaris de biblioteconomia i documentació*, n. 24.
http://bid.ub.edu/24/pdf/garcia2.pdf

Govern.cat (2019). "Govern.cat - Generalitat de Catalunya". *Govern.cat*, 4 de julio.
https://govern.cat/gov

Grgic, Ivana-Hebrang; **Mucnjak, Dorja** (2017). "Croatian and Irish public libraries on *Facebook*". *Qualitative & quantitative methods in libraries*, v. 1, n. 3, pp. 267-275.
http://qqml-journal.net/index.php/qqml/article/view/63

INE (2019). *Encuesta sobre equipamiento y uso de tecnologías de información y comunicación en los hogares - Año 2019*. Instituto Nacional de Estadística. Notas de prensa, 16 octubre.
https://www.ine.es/prensa/tich_2019.pdf

Joo, Soohyung; **Choi, Namjoo**; **Baek, Tae-Hyun** (2018). "Library marketing via social media: The relationships between *Facebook* content and user engagement in public libraries". *Online information review*, v. 42, n. 6, pp. 940-955.
https://doi.org/10.1108/OIR-10-2017-0288

Joo, Soohyung; **Lu, Kun**; **Lee, Taehun** (2020). "Analysis of content topics, user engagement and library factors in public library social media based on text mining". *Online information review*, v. 44, n. 1, pp. 258-277.
https://doi.org/10.1108/OIR-11-2018-0345

Lázaro-Rodríguez, Pedro (2020a). *Bibliotecas en 5 programas electorales: los casos de Ciudadanos, Unidos Podemos (IU y Podemos), PP y PSOE.*
https://wpd.ugr.es/~pedrolr/bibliotecasyeleccionesenespaña2016

Lázaro-Rodríguez, Pedro (2020b). "*COBib-Públicas*: observatorio de las bibliotecas públicas en España durante la pandemia por Covid-19 basado en noticias digitales". *Anuario ThinkEPI*, v. 14, e*14b04.*
https://doi.org/10.3145/thinkepi.2020.e14b04

Lázaro-Rodríguez, Pedro (2020c). "Covid-19, medios digitales y *Facebook*: interacciones, tratamiento y análisis de contenido basado en palabras clave de noticias de *okdiario.com* y *eldiario.es*". *Profesional de la información, v. 29, n. 4, e290409.*
https://doi.org/10.3145/epi.2020.jul.09

Lázaro-Rodríguez, Pedro; **López-Gijón, Javier**; **Herrera-Viedma, Enrique** (2018). "Visibilidad de las bibliotecas públicas y la lectura en medios de comunicación españoles frente a otros hechos de la cultura y relación con su uso: medidas para su mayor promoción y difusión". *BiD: textos universitaris de biblioteconomia i documentació*, n. 40.
https://doi.org/10.1344/BiD2018.40.7

Lund, Brady D. (2019). "Does public libraries' Facebook following correlate with library usage?". *Journal of web librarianship*.
https://doi.org/10.1080/19322909.2019.1693943

Marquina, Julián (2015). *¿Hablan los partidos políticos de bibliotecas en sus programas electorales para el #20D? Julian Marquina*, 16 diciembre.
https://www.julianmarquina.es/hablan-los-partidos-politicos-de-bibliotecas-en-sus-programas-electorales-para-el-20d

Martin-Da-Silva, Lilian-Lopes; **De-Almeida-Ferreira, Norma-Sandra** (2006). "Encenando a leitura: a leitura, o leitor e a biblioteca contruídos numa campanha publicitária veiculada no jornal". *Nuances. Estudos sobre educacão*, v. 13, n. 14, pp. 191-206.
https://doi.org/10.14572/nuances.v13i14.378

Mathiasson, Mia-Høj; **Jochumsen, Henrik** (2019). "Researching public library programs through *Facebook* events: a new research approach". *Journal of documentation*, v. 75, n. 4, pp. 857-875.
https://doi.org/10.1108/JD-08-2018-0137

MCD (2020a). *Bibliotecas públicas españolas en cifras.* Ministerio de Cultura y Deporte.
http://www.cultura.gob.es/alziraweb/alziraweb.cmd?command=GetAnexo&id=3

MCD (2020b). *Premiados de la campaña de animación a la lectura María Moliner - Plan de Fomento de la Lectura 2017-2020.* Ministerio de Cultura y Deporte.
https://fomentodelalectura.culturaydeporte.gob.es/actividades/campana-maria-moliner/premiados.html

Neo, Emily; **Calvert, Philip J.** (2012). "*Facebook* and the diffusion of innovation in New Zealand public libraries". *Journal of librarianship and information science*, v. 44, n. 4. pp. 227-237.
https://doi.org/10.1177/0961000611435038

Ortigosa-Delgado, María-Teresa (2017). "La Biblioteca Pública Municipal de Arroyo de la Miel en la prensa diaria". *Boletín de la Asociación Andaluza de Bibliotecarios*, n. 114, pp. 134-151.
https://dialnet.unirioja.es/servlet/articulo?codigo=6544932

Parker, Josie-Barnes; **Marín-Jiménez, María-Dolores**; **Gallo-León, José-Pablo**; **Gómez-Hernández, José-Antonio** (2017). "The Public Library system as an element in the 2007 and 2015 electoral programs of Spain's political parties in the region of Castilla-La Mancha". *Journal of library administration*, v. 57, n. 2, pp. 223-248.
https://doi.org/10.1080/01930826.2017.1281671

Sánchez-García, María-José (2012). "Las redes sociales en las bibliotecas públicas de la provincia de Málaga". *Boletín de la Asociación Andaluza de Bibliotecarios*, v. 27, n. 104, pp. 92-96.
https://dialnet.unirioja.es/servlet/articulo?codigo=4637704

Sánchez-Sánchez, Juan-José (1994). "Bibliotecas Públicas y partidos políticos: Las políticas bibliotecarias en los programas electorales (1977-1993)". *Boletín de la Anabad*, v. 44, n. 2, pp. 123-176.
https://dialnet.unirioja.es/descarga/articulo/50894.pdf

SharedCount (2020). *SharedCount: Social URL Analytics*.
https://www.sharedcount.com

Singh, Vivek K.; **Chayko, Mary**; **Inamdar, Raj**; **Floegel, Diana** (2020). "Female librarians and male computer programmers? Gender bias in occupational images on digital media platforms". *Journal of the Association for Information Science and Technology*, v. 71, n. 11, pp. 1281-1294.
https://doi.org/10.1002/asi.24335

Thelwall, Mike (2020). "Why are some websites researched more than others? A review of research into the global top twenty". *El profesional de la información*, v. 29, n. 1, e290101.
https://doi.org/10.3145/epi.2020.ene.01

Vallet-Sanmanuel, Gloria (2017). "Las redes sociales en las bibliotecas públicas de la Provincia de Valencia". *MEI: Métodos de información*, v. 8, n. 15, pp. 139-168.
https://doi.org/10.5557/IIMEI8-N15-139167

WebJunction (2018). *Social media and libraries survey summary.*
https://www.webjunction.org/news/webjunction/social-media-libraries-survey.html

Yu, Wei; **Chen, Junpeng** (2016). "Constructing linkage between libraries and up-to-date news". *Library hi tech*, v. 34, n. 2, pp. 301-313.
https://doi.org/10.1108/LHT-11-2015-0109

Libros en abierto de las editoriales universitarias españolas

Open books from Spanish university presses

Rosana López-Carreño; Ángel M. Delgado-Vázquez; Francisco-Javier Martínez-Méndez

Cómo citar este artículo:

López-Carreño, Rosana; **Delgado-Vázquez, Ángel M.**; **Martínez-Méndez, Francisco-Javier** (2021). "Libros en abierto de las editoriales universitarias españolas". *Profesional de la información*, v. 30, n. 1, e300116.

https://doi.org/10.3145/epi.2021.ene.16

Artículo recibido el 31-03-2020
Aceptación definitiva: 23-09-2020

Rosana López-Carreño ✉
https://orcid.org/0000-0002-2097-9389

Universidad de Murcia
Fac. de Comunicación y Documentación
Departamento de Información y Documentación
30100 Espinardo (Murcia), España
rosanalc@um.es

Ángel M. Delgado-Vázquez
https://orcid.org/0000-0003-2461-8553

Universidad Pablo Olavide
Área de Biblioteconomía y Documentación
Ctra. de Utrera, Km 1
41013 Sevilla, España
adelvaz@upo.es

Francisco-Javier Martínez-Méndez
https://orcid.org/0000-0003-1098-9361

Universidad de Murcia
Facultad de Comunicación y Documentación
Departamento de Información y Documentación
30100 Espinardo (Murcia), España
javima@um.es

Resumen

Este trabajo analiza el conjunto de las publicaciones científicas en acceso abierto, distintas de las revistas científicas (monografías, actas de congresos, materiales didácticos y literatura gris), dispuestas para su consulta por las editoriales universitarias públicas, estudiando su volumen, tipología documental, nivel de descripción y políticas de acceso abierto con el objetivo de medir el grado de incorporación y cumplimiento de los principios de Ciencia Abierta. Se ha llevado a cabo una exhaustiva revisión del material publicado en acceso abierto por estas editoriales que ha permitido establecer un diagnóstico de su nivel de edición en acceso abierto. La literatura gris es el tipo documental más frecuente seguido de la monografía, en la publicación en abierto de las editoriales universitarias que no alcanza ni el 5% de la producción editorial universitaria. Los resultados permiten concluir que la publicación académica, y más concretamente el libro en acceso abierto, sigue teniendo una presencia muy reducida dentro de la producción editorial de estas instituciones.

Palabras clave

Publicaciones en acceso abierto; Ciencia abierta; Editoriales universitarias; Publicación electrónica; Publicación digital; Libros en abierto; Libros académicos; Monografías; Indicadores de calidad; Publicaciones académicas; Políticas.

Abstract

This paper analyses the set of scientific publications in open access, other than journals (monographs, conferences proceedings, teaching materials and grey literature), published by Spanish public universities, studying their volume, documentary typology, level of description and open access policies with the aim of measuring their degree of incorporation and compliance with the principles of Open Science. An exhaustive review of the disposed material in open access by these publishers has been carried out, which has allowed to make a diagnosis of their level of open access publishing. Grey literature is the most common documentary type followed by the monograph, in the open publication of these publishers that does not reach even 5% of the average editorial production. The results allow us to conclude that the academic publishing, and more specifically the academic books in open access, still has a very reduced presence within the editorial production of these institutions.

Keywords

Open access publications; Open science; OA; Academic publishers; Electronic publications; Digital publishing; Open books; Scholarly books; Monographs; Quality indicators; Scholarly publishing; University presses; Policies.

1. Introducción

El movimiento por el acceso abierto de la información científica es uno de los procesos más influyentes en la comunicación científica desde principios de este siglo, habiendo propiciado significativas modificaciones en la difusión y acceso a los resultados de investigación (**Abadal**, 2012). En España, el primer paso fue la apuesta de la Administración Central por el movimiento de acceso abierto sustanciada en la *Ley 14/2011* (*España*, 2011), *de 1 de junio, de la ciencia, la tecnología y la innovación* (*Fecyt*, 2016; *Rebiun*, 2019) que pretendía impulsar, por parte de las entidades de I+D+i, los repositorios de acceso abierto de sus publicaciones científicas y el establecimiento de sistemas que los conectaran con iniciativas similares (*España*, 2011). En Europa, esta apuesta tiene su reflejo en el mandato inserto en el *Programa marco de financiación de la ciencia Horizonte 2020* para que todo beneficiario garantice el acceso abierto a todas las publicaciones científicas revisadas por pares relacionadas con sus resultados de investigación, asegurándose de que cualquier publicación científica revisada por pares pueda leerse, descargarse e imprimirse en línea. Si bien el tipo documental mayoritario es el artículo de revista también se recomienda brindar acceso abierto a otras publicaciones científicas como monografías, libros, actas de congreso, informes, etc. (*European Commission*, 2017, p. 5) sin olvidar el depósito de los datos de investigación en repositorios institucionales, temáticos o centralizados bajo licencias abiertas del tipo Creative Commons (preferentemente CC BY o CC0).

Estas iniciativas se han materializado en dos líneas de trabajo: el depósito y la publicación. El depósito en repositorio es la "vía verde" del acceso abierto. La otra línea, la "vía dorada", persigue la publicación de los artículos en revistas de acceso abierto (**Chan** *et al*., 2001). Este modelo aumenta de forma paulatina su importancia dentro del sector editorial, si bien ha experimentado cierta diversificación, dando lugar a otras vías y denominaciones como "diamante", "híbrida", "bronce", incluso "negro" (**Björk**, 2017; **Martín-Martín** *et al*., 2018) en las que, en muchos casos, los autores asumen parte de los costes de la publicación.

En las editoriales universitarias se debate sobre la circulación y la venta del libro académico. Los usos editoriales tradicionales en la distribución siguen vigentes, pero se están explorando otras vías de aproximación al público lector, abriendo

> "nuevos espacios para la interlocución de saberes, uno de esos espacios es por ejemplo [...] el acceso abierto, el cual puede constituirse en un amplificador de la labor editorial" (**Córdoba-Restrepo** *et al.*, 2018, p. 5).

Cordón-García ya planteaba que

> "la monografía científica no puede apartarse del flujo global de la comunicación académica, sino que ha de estar fuertemente imbricada en la misma. El libro electrónico constituye una oportunidad única para favorecer este encuentro" (**Cordón-García**, 2014, p. 270).

En las universidades españolas estas iniciativas se han implementado por medio de dos vías paralelas, independientes entre sí:

- a través de los repositorios institucionales, gestionados por las bibliotecas universitarias, se facilita el depósito, el autoarchivo ("vía verde") e incluso, aunque de manera minoritaria, la publicación de las obras generadas en su institución;
- las editoriales universitarias han iniciado el proceso de apertura de los libros académicos, propiciando la publicación de resultados de investigación a través de la "vía dorada". Estos libros, según Urbano,

> "responden al perfil de la monografía académica, entendida como vehículo de comunicación de resultados de investigación, y para la que el acceso abierto se puede ver como una extensión lógica de su exitosa aplicación a las revistas científicas" (**Urbano**, 2018, p. 30).

Las bibliotecas y editoriales universitarias deben tener definidas políticas, requisitos y procedimientos sobre el acceso abierto de su producción científica, dando visibilidad a las obras tanto depositándolas en sus repositorios institucionales como publicándolas en la propia web de la editorial. Para ello es preciso:

- Establecer políticas de acceso abierto normalizadas para sus repositorios y servicios editoriales, así como la necesaria adopción unívoca del uso de licencias abiertas, preferentemente Creative Commons (CC), para los documentos a archivar y a publicar.
- Identificar de forma clara los tipos documentales a publicar en abierto que requieran de revisión por pares (ejemplo: monografías o informes), así como aquellos que por su naturaleza (premios, homenajes, etc.) no requieran de dicha revisión.
- Combinar la publicación con los modelos de negocio de las editoriales universitarias (por ejemplo, suscribir con los autores contratos de embargo temporales y proceder a la publicación en abierto transcurrido un tiempo). De esta forma se aumenta el conjunto de publicaciones potenciales a difundir por esta vía.

- Definir el flujo editorial y de apertura de las publicaciones en abierto por el transcurrir de las obras para que el autor/investigador obtenga las garantías de reconocimiento de su publicación.
- Imponer la obligatoriedad de la utilización de identificadores persistentes y unívocos, como orcid, DOI o handle, renunciando al uso del código ISBN como identificador principal ya que su finalidad es el control comercial de la monografía y esto carece de sentido en el acceso abierto. Con el uso de orcid se mejora el control de autoridades, así como

  > "su integración e interoperabilidad en plataformas bibliográficas, gestores editoriales y otros perfiles de autores e investigadores" (**Martínez-Méndez**; **López-Carreño**, 2019, p. 91)

  y, con el DOI, se intenta facilitar la accesibilidad y la extracción de referencias de las publicaciones en abierto.
- Usar esquemas de metadatos, como *Dublin Core* o *DataCite*, para lograr la interoperabilidad entre repositorios y sistemas de gestión editorial con la idea de aumentar la disponibilidad de metadatos abiertos en las publicaciones académicas:

  > "*Crossref*, *I4OC* y *OpenCitations* han jugado un papel crucial en estos desarrollos. Han centrado su atención principalmente en hacer datos de citas disponibles abiertamente" (**Waltman**, 2019).

- Extraer y visibilizar las referencias incluidas en estas publicaciones, de manera similar a como se hace con las revistas científicas, para ser más fácilmente rastreadas y contabilizadas por los motores de búsqueda y las plataformas bibliográficas:

  > "Una comparación de *Crossref* con *Web of Science* y *Scopus* mostró que faltan decenas de millones de referencias en *Crossref* porque los editores no pudieron depositarlas" (**Van-Eck** *et al.*, 2018).

- Identificar las entidades y proyectos de investigación financiados ligados a los libros en abierto. Esta información deberá recogerse en un campo propio de su descripción (al igual que se hace con los artículos de las revistas) para evidenciar la rentabilidad de la producción científica subvencionada.
- Registrar y agregar contenidos a otros repositorios y contenedores de publicaciones en acceso abierto temáticos de monografías, como *Oapen Library* o *Directory of Open Access Books* (*DOAB*), para la obtención de una mayor visibilidad.
- Implementar, de forma unificada, métricas de uso en los sistemas de gestión de las publicaciones abiertas sincronizadas con las propias de los repositorios.

Las monografías publicadas por las editoriales universitarias se están revalorizando gracias al interés que han despertado en las agencias nacionales de evaluación. *Aneca* puso en marcha hace poco tiempo el sello o mención de calidad editorial CEA-APQ con el objetivo de

> "reconocer las mejores prácticas dentro de la edición universitaria española y convertirse en un signo distintivo que tanto las agencias de evaluación de la actividad investigadora como la comunidad académica e investigadora podrán identificar fácilmente" (*UNE*, 2020).

Este sello de calidad es exclusivo para la valoración de colecciones de las editoriales universitarias, servicios que, hasta ahora, han estado más centrados en la publicación impresa comercial incentivando apenas un poco la publicación en acceso abierto. Teniendo en cuenta que estas editoriales

> "constituyen el primer grupo de edición académica de España, por delante de otros como *Hachette* o *Planeta*, ya que en 2015 publicaron el 30% de los libros académicos" (**Abadal**; **Ollé**; **Redondo**, 2018, p. 301)

es imprescindible establecer estrategias coordinadas entre las universidades en torno al libro académico en abierto como medio de difusión de la actividad científica. A partir de la afirmación anterior, si el volumen de publicación de monografías en acceso abierto es bajo en las editoriales universitarias, lo normal es que lo sea en el conjunto de todas las editoriales españolas. Si las editoriales más cercanas a los investigadores no fomentan las monografías en abierto va a ser complicado que lo haga una editorial comercial.

Abadal, **Ollé** y **Redondo** en el trabajo anterior (2018, p. 308), concluyen que, si bien

> "el número de editoriales que publican en acceso abierto es notable, el número de títulos no lo es, y no se dispone de plataformas que permitan un acceso integrado y una buena visibilidad de la oferta".

En el ámbito latinoamericano, **Córdoba-Restrepo** *et al.* (2018) consideran poco consolidada la edición en abierto de libros académicos, sólo 31 editoriales universitarias (el 21%) aportaban alguna información sobre su modelo de negocio o la protección de las obras, es decir, con las licencias para su uso, copia, difusión, etc. Ahondando en esto, el informe elaborado por el grupo *E-Lectra* sobre las Universidades asociadas a la *Unión de Editoriales Universitarias Españolas* apunta a que el porcentaje de aquellas que han publicado algún libro en acceso abierto es todavía bajo, el 57,1% (**Cordón-García**, 2019).

La disposición en abierto de las monografías académicas es un hecho que tendrá que replantearse a corto plazo como ya ocurre en otros países, como por ejemplo en Reino Unido cuyo

> "organismo de financiación para la investigación e innovación (*UKRI*) propone extender un requisito de acceso abierto a las monografías académicas y capítulos de libros a partir de enero de 2024" (**Page**, 2020);

o en EUA, con la iniciativa *TOME* cuyo objetivo es

> "apoyar la publicación digital de libros académicos revisados por pares por las editoriales universitarias participantes" (**Ruttenberg**, 2019).

En el caso de Alemania, el proyecto *Open-Access-Hochschulverlag* de la *Leipzig University of Applied Sciences*, establece un minucioso flujo de trabajo para la publicación de monografías de acceso abierto buscando su rentabilidad y eficiencia (**Schrader** *et al.*, 2020), que podría adaptarse en las editoriales universitarias españolas. El estudio citado del grupo *E-Lectra* recoge la opinión del 80% de los editores universitarios, que expresan su preocupación por la pervivencia del libro académico, y lo achacan sobre todo a:

- sistemas de evaluación científica;
- bajada en el número de lectores;
- superior uso de las revistas como medio de comunicación de los resultados de investigación.

Poco más de un tercio de estos servicios ven en el libro digital en acceso abierto una tabla de salvación (**Cordón-García**, 2019).

2. Definición del libro académico abierto

La *Ley 23/2011, de 29 de julio, de depósito legal*, define libro como la

> "obra científica, artística, literaria o de cualquier otra índole que constituye una publicación unitaria en uno o varios volúmenes y que puede aparecer impresa o en cualquier soporte susceptible de lectura".

El texto legal considera libros (como no podía ser de otro modo) a los electrónicos y los que se publiquen o se difundan por internet. Esta definición genérica no parece ser suficiente en el entorno de la ciencia abierta y lo que se espera del libro académico abierto, que debería estar alineado con la revista académica en abierto para poder ser considerado como una monografía académico-científica, resultado de una investigación muchas veces financiada y sometida a criterios de garantía de calidad editorial (incluyendo, aunque no sólo, la revisión por pares). Estos libros se ponen a disposición de la comunidad científica en repositorios u otros contenedores para su uso libre y gratuito.

Para cuantificar el volumen de la publicación de estas monografías en abierto y hacernos una idea de su importancia, disponemos de *Dimensions*, base de datos con amplia cobertura que incluye las monografías editadas en colaboración, y que permite filtrar por publicaciones en acceso abierto (**Orduña-Malea**; **Delgado-López-Cózar**, 2018; **Thelwall**, 2018; **Harzing**, 2019).

Tabla 1. Datos totales de monografías y libros editados en colaboración

	N. de monografías	N. en OA	Depositadas	Vía verde, preprints y postprints	Publicadas
Monografías	778.766	242.680 (31,16%)	16.288	148.521	77.871
Libros editados (en colaboración)	292.199	37.754 (12,92%)	6.294	18.588	12.917

El gráfico 1 muestra la evolución de las monografías y libros publicados desde el año 2010 con datos procedentes de *Dimensions*, así como la cifra anual de este tipo de documentos disponibles en acceso abierto.

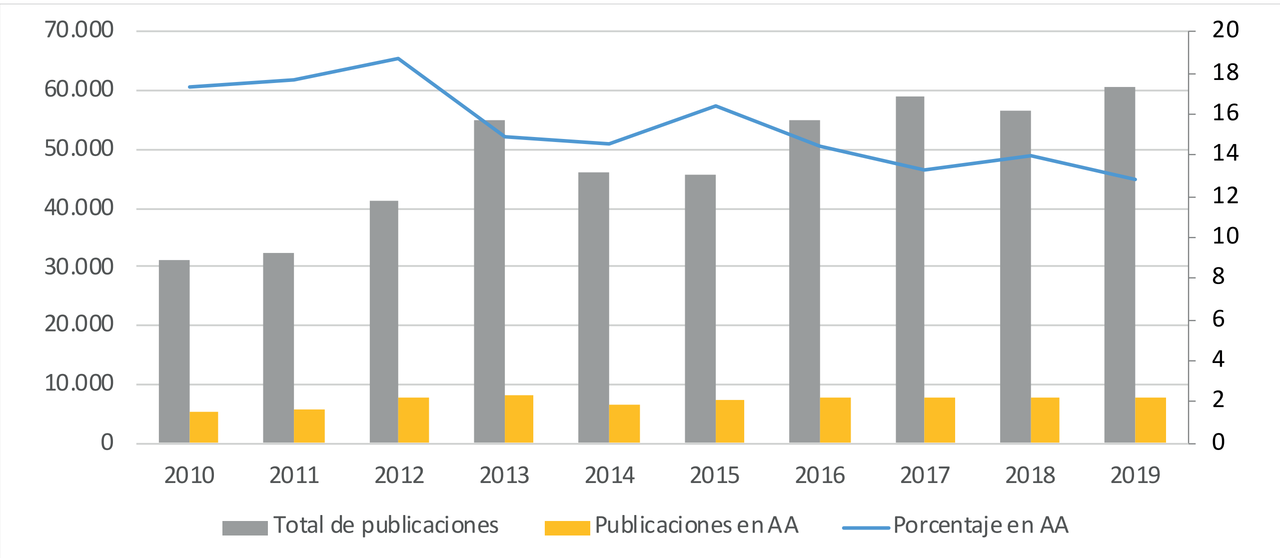


Gráfico 1. Evolución de libros (monografías y libros editados) totales y en acceso abierto, en el mundo, según *Dimensions* (2010-2019)

Como se aprecia, el porcentaje es relativamente bajo (no llega al 15%), y no ha experimentado variaciones notables a lo largo de la década (incluso en 2019 descendió ligeramente). En el caso de España no se disponen de datos precisos de la publicación en abierto de los libros de las universidades públicas, más allá del porcentaje que sobre el total de libros académicos publicados aportan **Abadal**, **Ollé** y **Redondo** (2018).

Paliar esta deficiencia de datos es uno de los objetivos que persigue el presente trabajo, además de observar el grado de disposición de libros y monografías en acceso abierto en las colecciones editadas por las editoriales universitarias públicas, estudiando su volumen, tipología documental, descripción y políticas de acceso abierto para conocer el grado de incorporación y cumplimiento de los preceptos de ciencia abierta.

3. Metodología

El primer paso consistió en visitar las sedes web de las universidades públicas españolas y localizar las webs de sus respectivas editoriales. En esta revisión se observó que 45 universidades disponen de editorial propia y únicamente 20 de ellas publican libros y monografías en abierto, agrupadas en un mismo espacio o permitiendo su localización a través de un buscador interno en la web de la editorial, constituyendo este subgrupo nuestro objeto de estudio: *Autónoma de Madrid*, *A Coruña*; *Cantabria*, *Castilla-La Mancha*, *Córdoba*, *Extremadura*, *Girona*, *Granada*, *La Rioja*, *Málaga*, *Murcia*, *Salamanca*, *Santiago de Compostela*, *Valencia*, *Valladolid*, *País Vasco*, *Internacional de Andalucía*, *Jaume I*, *Politècnica de València* y *Rovira i Virgili*.

El segundo paso fue recopilar información relativa a:

- uso de identificadores en las publicaciones en abierto: DOI, orcid e ISBN;
- modo de alojamiento y uso del texto completo, anotando si es vía descarga directa de la web de la editorial, repositorio institucional o por medio de un gestor de contenidos como, por ejemplo, *OMP* (*Open Monograph Press*), el más difundido, ya que es de *PKP*, la misma institución canadiense que produce *OJS*, el gestor de revistas científicas;
- política de acceso abierto: si se indican los requisitos y procedimientos en torno al acceso abierto de sus obras;
- tipo de licencia Creative Commons utilizada: CC BY/ CC BY-SA/ CC BY-ND/ CC BY-NC-ND. Así se dispondrá de información sobre el tipo de licencia más frecuentemente empleada en las editoriales universitarias.

El último paso consistió en comprobar las publicaciones en acceso abierto en las editoriales objeto de estudio. Esta fase fue laboriosa porque ninguna ofrecía esta distinción y ha habido que visualizar uno a uno los documentos publicados en la web. En este proceso se descartó a la *Universidad de Salamanca* por resultar imposible este filtrado y el posterior cómputo. En este último paso, se descartaron las revistas porque nuestro interés radicaba en los libros y monografías, principalmente, junto con las actas de congresos, material didáctico y literatura gris (informes, exposiciones, compilaciones, homenajes, lecciones de apertura, premios, tesis o mapas).

La observación y recolección de datos se llevó a cabo durante el mes de febrero de 2020.

4. Resultados

Respecto al uso de identificadores persistentes destaca el bajo nivel de uso de identificadores de autores (orcid sólo es utilizado por el 20% de las editoriales), así como del registro de DOI (sólo un 25% lo consigna). Estos valores están muy lejos de las revistas científicas en abierto donde el uso del DOI es generalizado y orcid es una tendencia emergente (**Martínez-Méndez**; **López-Carreño**, 2019). Es prácticamente unánime la asignación del ISBN, con la excepción de la editorial de la *Universidad de Castilla-La Mancha* que no lo asigna a sus publicaciones en abierto y opta por el DOI para identificar sus publicaciones. Esto se debe a la digitalización de publicaciones impresas o a los usos y costumbres de la gestión editorial tradicional en papel, así como a las demandas de los autores en el requerimiento del ISBN para su publicación a efectos meritorios.

Diez de las editoriales universitarias publican directamente en la web. Sólo tres de ellas (*Autónoma de Madrid*, *Murcia* y *Rovira i Virgili*) lo hacen por medio de un sistema gestor de contenidos: *Open Monograph Press* (*OMP*) de *PKP*. Este escaso nivel de uso está motivado por la lenta evolución de esta aplicación de código abierto como, por ejemplo, la necesidad de incorporar en su gestión la fase de revisión de los manuscritos (**Fruin**, 2019). El 30% de las editoriales (5 en total) deposita sus publicaciones en abierto en sus repositorios institucionales, fórmula alternativa válida siempre que dichos repositorios cumplan unos mínimos requisitos en cuanto al uso de identificadores (URI, orcid o DOI/Handle) y garanticen una básica descripción de metadatos.

En ningún caso se lleva a cabo la extracción de las referencias bibliográficas de las propias publicaciones en abierto por parte de las editoriales, algo habitual en las revistas. Esto se debe, fundamentalmente, a no disponer de un sistema de gestión que lo permita, debidamente implementado en el proceso editorial. Aunque existen soluciones de software libre para la gestión editorial de monografías, como el gestor *OMP* antes citado, este aspecto (extracción de la bibliografía) no se ha considerado todavía en la descripción de este tipo de publicación, decisión contraproducente porque es esencial para el recuento de las citas y la visibilidad de las referencias bibliográficas. Llama poderosamente la atención que tampoco se realiza esto a nivel de los repositorios institucionales, sistemas donde sí es posible extraer las referencias citadas para posibilitar su posterior rastreo y agregación por parte de buscadores y contenedores, algo fundamental en el paradigma de intercambio de información bibliográfica.

Tabla 2. Uso de identificadores en las publicaciones en abierto de las editoriales universitarias

Universidades públicas	URL editorial	DOI	Orcid	ISBN
Autónoma de Madrid (UAM)	*https://libros.uam.es*	No	No	Sí
A Coruña (UDC)	*https://www.udc.es/es/publicacions*	Sí	No	Sí
Cantabria (Unican)	*https://www.editorial.unican.es*	Sí	No	Sí
Castilla-La Mancha (UCLM)	*http://publicaciones.uclm.es*	Sí	No	No
Córdoba (UCO)	*https://www.uco.es/ucopress*	No	No	Sí
Extremadura (UEX)	*https://www.unex.es/organizacion/servicios-universitarios/servicios/servicio_publicaciones*	No	No	Sí
Girona (UDG)	*http://www.udg.edu/es/viu/serveis-universitaris/llibres-i-revistes-udg*	No	No	Sí
Granada (UGR)	*https://editorial.ugr.es*	No	No	Sí
La Rioja (UR)	*https://publicaciones.unirioja.es*	No	No	Sí
Málaga (UMA)	*https://www.umaeditorial.uma.es*	No	Sí	Sí
Murcia (UM)	*https://www.um.es/web/editum*	No	No	Sí
Salamanca (USAL)	*https://eusal.es/index.php/eusal*	No	No	Sí
Santiago de Compostela (USC)	*http://www.usc.es/es/servizos/publicacions*	No	No	Sí
València (UV)	*https://puv.uv.es*	No	No	Sí
Valladolid (UVA)	*http://www.publicaciones.uva.es*	No	Sí	Sí
País Vasco (UPV/EHU)	*https://www.ehu.eus/es/web/argitalpen-zerbitzua/home*	No	No	Sí
Internacional de Andalucía (UIA)	*https://www.unia.es/publicaciones*	No	No	Sí
Jaume I (UJI)	*https://www.uji.es/serveis/scp*	Sí	Sí	Sí
Politècnica de València (UPV)	*http://www.upv.es/entidades/AEUPV*	No	No	Sí
Rovira i Virgili (URV)	*http://www.publicacions.urv.cat*	Sí	No	Sí
Subtotales (Sí)		5/20 (25%)	4/20 (20%)	19/20 (95%)

A pesar de la disposición de las publicaciones en abierto, sólo el 30% de las editoriales que forman parte del estudio hace alguna mención a su política de acceso abierto, requisito obligatorio en las revistas y, de manera progresiva, una exigencia en directorios de libros como *DOAB* o la plataforma *Oapen*. En este sentido, destacan las universidades *Politècnica de València* y *Rovira i Virgili* por su clara apuesta hacia el acceso abierto dentro de sus políticas institucionales (además de la puesta en marcha del repositorio institucional y del portal de revistas científicas, estas universidades han aprobado mandatos para el acceso abierto, se han incorporado a manifiestos internacionales, han llevado a cabo campañas de sensibilización y de ayuda para el fomento de la publicación en acceso abierto, entre otras actividades que demuestran su interés por este movimiento). El bajo porcentaje identificado entre las editoriales de las universidades españolas entra en claro conflicto con las declaraciones de apoyo al acceso abierto a la producción científica que sus consejos de gobierno aprobaron hace cuatro o cinco años.

Por otra parte, destaca negativamente que algo más de un tercio de las editoriales analizadas no indique la modalidad de licencia Creative Commons asignada a las publicaciones en abierto. Este hecho llama poderosamente la atención porque estas publicaciones no van a ser objeto de venta y se debería indicar a los lectores la posibilidad de uso y reutilización de sus contenidos. Entre las que sí

Tabla 3. Políticas y licencias de acceso abierto establecidas en las publicaciones en abierto por las editoriales universitarias

Editorial	Política OA	Licencia *Creative Commons*
UAM	Sí	CC BY-NC-ND
UDC	No	CC BY NC ND
Unican	No	No
UCLM	Sí	CC BY-NC-ND
UCO	No	No
UEX	Sí	CC BY-NC-ND
UDG	No	CC BY-NC-ND
UGR	No	No
UR	Sí	CC BY-NC-ND
UMA	No	CC BY-NC-ND
UM	No	No
USAL	No	CC BY-NC-ND
USC	No	CC BY-NC-ND
UV	No	No
UVA	No	CC BY-NC-ND
UPV/EHU	No	No
UIA	No	No
UJI	No	CC BY SA
UPV	Sí	CC BY
URV	Sí	CC BY-NC-ND
Subtotales Sí (6/20) = 30% No (14/20) = 70%		CC BY-NC-ND 60% CC BY SA 5% CC BY 5% No 35%

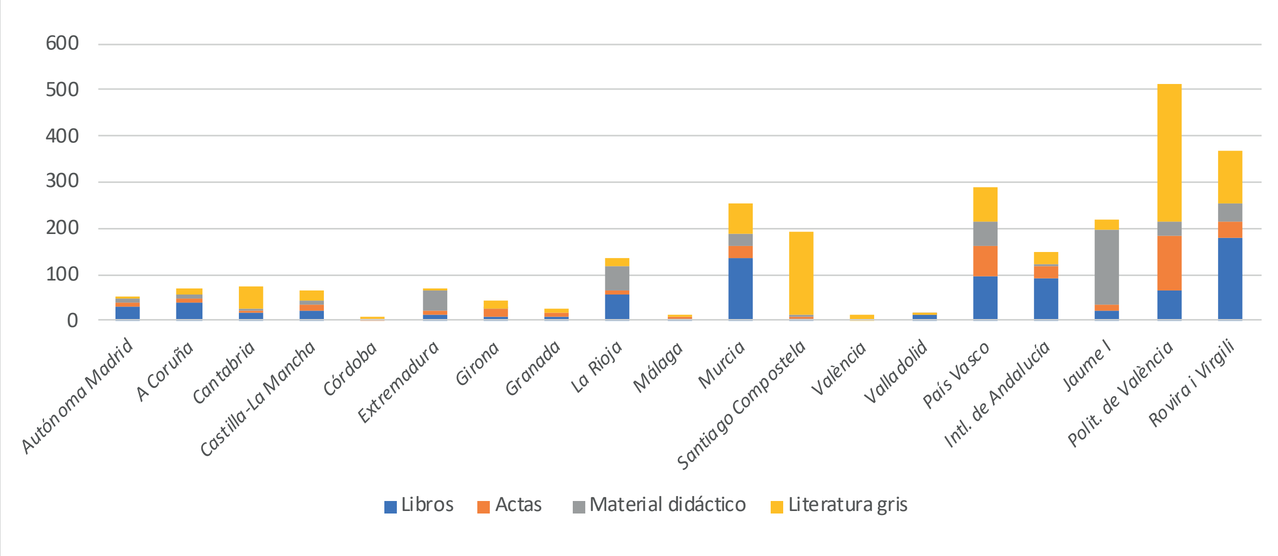


Gráfico 2. Distribución de número de publicaciones en abierto en total por tipo documental hasta febrero de 2020

informan, es mayoritaria (en un 60% delos casos) la modalidad CC BY-NC-ND (atribución, no uso comercial y no obra derivada). Esto tampoco es positivo porque esta modalidad es restrictiva respecto a su uso y va en contra de la línea futura trazada en el *Plan S* (**Hernández-Pérez**, 2019). La excepción es la *Universitat Politècnica de València* (*UPV*) que utiliza la licencia más abierta de las disponibles (BY: atribución).

En cuanto a la producción editorial, tal como se observa en el gráfico 2, la *UPV* es la que tiene más publicaciones en acceso abierto (515), seguida de la *Rovira i Virgili* (370), *País Vasco* (288) y *Murcia* (252). Estas cifras, sin ser muy altas, contrastan enormemente con el escaso volumen de las editoriales de *Valladolid* (16), *València* (14), *Málaga* (10) y *Córdoba* (9). La *UPV* es además la única de entre las cinco politécnicas españolas que edita monografías en acceso abierto.

Respecto a los tipos documentales predominantes publicados en acceso abierto en las editoriales analizadas, el más frecuente es la literatura gris (936) seguido de los libros (805), material didáctico (443) y actas de congresos (388). Es revelador que los libros no sean el tipo predominante entre las publicaciones en abierto, cuando, junto con las revistas científicas, son primordiales y primigenios en las editoriales universitarias. Esto induce a pensar que el acceso abierto ha servido para dar salida, además de a trabajos académicos de alto nivel, a otro tipo de monografías de complicada distribución comercial y cuyas ediciones no siempre han formado parte de una política editorial clara del servicio. También han tenido hueco en los portales de acceso abierto obras fruto de compromisos de las autoridades académicas universitarias y cuya publicación no suele estar ligada a proceso alguno de revisión de su calidad. Esta tesis se refuerza con el hecho de que la literatura gris sea el tipo documental con mayor número de publicaciones en acceso abierto, síntoma de que esta vía de acceso a la publicación ha sido, hasta ahora, una opción para la producción científica que quedaba fuera del proceso editorial tradicional. Las editoriales universitarias que destacan por la publicación de libros en abierto son, en primer lugar, la *Rovira i Virgili* (178 libros), seguida de *Murcia* (134), *País Vasco* (95) e *Internacional de Andalucía* (91). En el otro extremo, las universidades de *Córdoba* y *Valencia* no disponen de ningún libro en abierto en la web de sus editoriales (con independencia del uso del repositorio institucional).

Tabla 4. Número de registros (ISBNs) totales de cada editorial universitaria

Editorial	ISBNs totales	Abiertos	% abierto
UAM	1.633	53	3,25
UDC	4.652	70	1,50
Unican	1.059	74	6,99
UCO	1.448	9	0,62
UEX	1.122	72	6,42
UDG	754	42	5,57
UGR	7.722	24	0,31
UR	296	136	45,95
UMA	2.104	10	0,48
UM	2.577	252	9,78
USC	2.173	194	8,93
UV	4.197	14	0,33
UVA	11.017	16	0,15
UPV/EHU	2.192	288	13,14
UIA	3.283	149	4,54
UJI	290	217	74,83
UPV	1.334	515	38,61
URV	3.638	370	10,17

Fuente: Base de datos ISBN (19-02-2020).
http://www.mcu.es/webISBN
Se descarta la editorial de la *UCLM* porque no asigna ISBN a sus publicaciones en abierto

La tabla 4 muestra el porcentaje de títulos publicados en abierto frente al total de los editados por las universidades públicas españolas. Con la excepción de las universidades de *La Rioja* y *Jaume I* (y quizá, pero con menor proporción, la *Rovira i Virgili*), la presencia de los libros en abierto en el catálogo de las editoriales universitarias sigue siendo simbólica. La media total se sitúa en 139 documentos por universidad. Este valor equivale al 4,9% de la producción total editorial universitaria ya que la media de ISBNs registrados es de 2.860 publicaciones. Esto muestra un tímido avance a pesar de las políticas y recomendaciones en torno a la ciencia abierta impulsadas por la Unión Europea, quedando muy lejos del 15% de media que ofrecían los datos de *Dimensions* (tabla 1). Otro indicio revelador del bajo interés de las editoriales universitarias españolas por el libro en abierto es que, de manera generalizada, no se especifica si dichas publicaciones responden o no a resultados de investigación (a pesar de que, legalmente, tendría que aparecer esa información si ha habido alguna subvención oficial para financiar un proyecto).

5. Hacia unos libros académicos más abiertos en las universidades españolas

Antes de presentar las conclusiones de este trabajo, y de forma esquemática, proponemos reflexionar sobre la necesaria adopción de una serie de acciones o criterios a llevar a cabo por parte de las editoriales universitarias en sus procesos de edición y publicación de libros en abierto. Estas recomendaciones están centradas en las fases de edición, descripción, publicación, difusión y medición, tal como muestra el gráfico 3.

En la fase de edición es necesario definir no sólo el estilo de redacción académico-científico, procurando una estructura discursiva ágil y estandarizada, también hay que establecer (por parte de la editorial) el procedimiento de revisión por pares que debería ser análogo al que siguen las revistas científicas en cuanto a rigor y calidad. Es necesario materializar los acuerdos o contratos de edición bajo licencias de reutilización del contenido como ocurre en los contratos de edición de publicaciones comerciales. Para ello, es recomendable disponer de modelos de acuerdo o contratos necesarios supervisados por los servicios jurídicos de las universidades.

La fase de descripción lleva implícita un aumento de tareas documentales vitales para el resto de etapas de la publicación en abierto, tales como el establecimiento de estructuras y formatos de metadatos como ya se hace en las revistas académicas, además de la adopción y obligatoriedad del uso de identificadores persistentes, tanto para los autores/investigadores (orcid) como para las publicaciones digitales (DOI), garantizando así el control de autoridades y la localización permanente de la publicación. En esta fase será necesaria la extracción de las referencias bibliográficas citadas en las monografías para su visibilidad y cómputo en las distintas métricas bibliográficas. Este aspecto es vital para valorar adecuadamente el impacto científico real en disciplinas que tradicionalmente quedan relegadas en los rankings de estas métricas bibliográficas, muchas de ellas pertenecientes a las Ciencias Sociales y, fundamentalmente, casi todas las Humanidades.

En la fase de difusión es importante que las editoriales y las bibliotecas universitarias registren y revisen los datos de sus colecciones de monografías abiertas en cualquier fuente de información bibliográfica que fomente la visibilidad y el acceso a este tipo de publicación a nivel internacional (como *DOAB* u *Oapen*), además de compartir sus contenidos en redes sociales científicas y propiciar el seguimiento de los indicadores altmétricos (**Hammarfelt**, 2014; **Torres-Salinas**; **Robinson-García**; **Gorraiz**, 2017; **Torres-Salinas**; **Gorraiz**; **Robinson-García**, 2018). También deben preocuparse por la

Gráfico 3. Acciones a llevar a cabo por las editoriales universitarias para la gestión y difusión de sus monografías en abierto. Adaptación de **Kramer** y **Bosman** (2018).

búsqueda y seguimiento de las reseñas de sus libros en abierto que seguirán proporcionando, al igual que ocurre en el sector editorial privado, una valoración cualitativa de la obra abierta (**Gorraiz**; **Gumpenberger**; **Purnell**, 2014). También se deberán contemplar, en el conjunto de métricas en torno a la monografía abierta, las estadísticas de uso no sólo de las estadísticas de las editoriales o los repositorios institucionales, sino también de otras fuentes de difusión de las publicaciones en abierto, como repositorios especializados o las redes sociales académicas.

Todos estos aspectos, si se introdujeran en la gestión y difusión de los libros en abierto, supondrían un replanteamiento generalizado en los servicios editoriales universitarios, que requerirían de apoyo institucional y materia (personal técnico e infraestructura tecnológica, principalmente).

6. Conclusiones

A modo de conclusión general, la publicación académica en abierto (más concretamente el libro académico) sigue siendo una anécdota en la producción editorial de las universidades públicas españolas, a pesar de los requerimientos, declaraciones, políticas y mandatos de los organismos de financiación. Una de las causas de esta situación es la escasa concreción e implementación de políticas de acceso abierto en el seno de las universidades (muchas de ellas se limitan a suscribir declaraciones de apoyo, pero no aplican normas ni procedimientos) y los cambios sobre el tradicional modelo de negocio y gestión editorial que puede llegar a provocar el acceso abierto de los libros académicos en el sector editorial universitario. La solución a este problema pasa por establecer estrategias y procedimientos de gestión, depósito y difusión de su producción editorial en abierto, alineando servicios bibliotecarios y editoriales en aras de una gestión rigurosa, sostenible y rentable que apueste por la visualización global de su producción académico-científica, sin renunciar a la gestión editorial tradicional que, en consecuencia, deberá someterse a un replanteamiento de su finalidad.

Los procesos editoriales de los libros académicos en abierto, en general, deben revisarse para adaptarse a las nuevas exigencias bibliográficas y bibliométricas, del mismo modo que ha ocurrido con las revistas científicas en abierto, utilizando lenguajes y estructuras de metadatos y empleando identificadores persistentes para la automatización del intercambio de datos bibliográficos que mejoren la visibilidad, transmisión de conocimiento y citación de las obras monográficas editadas, así como mejorar la imagen de transparencia en la propia gestión editorial universitaria.

Del mismo modo que las revistas científicas en abierto editadas por las universidades están en plena adaptación a las exigencias de la ciencia abierta, es preciso extender esta renovación al resto de publicaciones en abierto, empezando por el libro académico dotándolo asíde la calidad y visibilidad que merece en el contexto de difusión científica actual.

Por último, las editoriales universitarias son servicios públicos para la difusión de los resultados de la actividad investigadora. Por esta razón, deben también adaptar sus protocolos para que la publicación en abierto les acerque más a lo estipulado en el marco legal de la Ley de la Ciencia. Los títulos actualmente publicados no parecen estar muy alineados con esa estrategia.

7. Referencias

Abadal, Ernest (2012). *Acceso abierto a la ciencia*. Editorial UOC. ISBN: 978 84 97885485

Abadal, Ernest; **Ollé, Candela**; **Redondo, Silvia** (2018). "Publicación de monografías en acceso abierto por editoriales universitarias españolas". *El profesional de la información*, v. 27, n. 2, p. 300.
https://doi.org/10.3145/epi.2018.mar.08

Björk, Bo-Christer (2017). "Gold, green, and black open access". *Learned publishing*, v. 30, n. 2, pp. 173-175.
https://doi.org/10.1002/leap.1096

Chan, Leslie; **Cuplinskas, Darius**; **Eisen, Michael**; **Friend, Fred**; **Genova, Yana**; **Guédon, Jean-Claude**; **Hagemann, Melissa**; **Harnad, Stevan**; **Johnson, Rick**; **Kupryte, Rima**; **La-Manna, Manfredi**; **Rév, István**; **Segbert, Monika**; **De-Souza, Sidnei**; **Suber, Peter**; **Velterop, Jan** (2001). "Budapest open access initiative".
http://www.budapestopenaccessinitiative.org/read

Córdoba-Restrepo, Juan-Felipe; **Giménez-Toledo, Elea**; **Mañana-Rodríguez, Jorge**; **Tejada-Artigas, Carlos**; **Urbano-Salido, Cristóbal** (2018). "Libros de acceso abierto en los sitios web de las editoriales universitarias latinoamericanas". En: Giménez-Toledo, Elea; Córdoba-Restrepo, Juan-Felipe (eds.). *Edición académica y difusión. Libro abierto en Iberoamérica*. Bogotá: Editorial Universidad del Rosario; Editorial Comares, pp. 183-204. ISBN: 978 958 7841688
https://doi.org/10.12804/th9789587841671.11

Cordón-García, José-Antonio (2014). "Nuevas tendencias en el libro electrónico universitario". *Anuario ThinkEPI*, v. 8, pp. 269-276.
https://recyt.fecyt.es/index.php/ThinkEPI/article/view/29592

Cordón-García, José-Antonio (coord.) (2019). *Estudio de la edición universitaria en el contexto de la edición académica. Fase II: Especialización y publicación de monografías digitales y de acceso abierto de las editoriales de la UNE: informe 2019*. Grupo Electra. Universidad de Salamanca.
http://www.une.es/media/Ou1/Image2/webnoviembre2019/EstudioUNE-Especializacion_digital.pdf

España (2011). "Ley 14/2011, de 1 de junio, de la ciencia, la tecnología y la innovación". *Boletín oficial del estado*, n. 131, 2 junio, pp. 54387-54455.
https://www.boe.es/buscar/act.php?id=BOE-A-2011-9617&p=20190209&tn=2

European Commission (2020). "Trends for open access to publications". *Open science monitor*.
https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/open-science-monitor/trends-open-access-publications_en

European Commission (2017). *Guidelines to the rules on open access to scientific publications and open access to research data in Horizon 2020*. Directorate-General for Research & Innovation.

Fecyt (2016). *Informe de la Comisión de seguimiento sobre el grado de cumplimiento del artículo 37 de la Ley de ciencia*. Fundación Española para la Ciencia y la Tecnología.
https://www.fecyt.es/es/publicacion/informe-de-la-comision-de-seguimiento-sobre-el-grado-de-cumplimiento-del-articulo-37-de

Fruin, Christine (2019). "Finding our own direction: Open monograph publishing with Atla, OMP and Editoria". In: *PKP Scholarly publishing conference 2019*.
https://conference.pkp.sfu.ca/index.php/pkp2019/pkp2019/paper/view/685

Gorraiz, Juan; **Gumpenberger, Christian**; **Purnell, Philip J.** (2014). "The power of book reviews: a simple and transparent enhancement approach for book citation indexes". *Scientometrics*, v. 98, n. 2, pp. 841-852.
https://doi.org/10.1007/s11192-013-1176-4

Hammarfelt, Björn (2014). "Using altmetrics for assessing research impact in the humanities". *Scientometrics*, v. 101, n. 2, pp. 1419-1430.
https://doi.org/10.1007/s11192-014-1261-3

Harzing, Anne-Wil (2019). "Two new kids on the block: How do Crossref and Dimensions compare with Google Scholar, Microsoft Academic, Scopus and the Web of Science?". *Scientometrics*, v. 120, n. 1, pp. 341-349.
https://doi.org/10.1007/s11192-019-03114-y

Hernández-Pérez, Tony (2019). "El Plan S: hacia el acceso abierto sin revistas híbridas". *Anuario ThinkEPI*, v. 13.
https://doi.org/10.3145/thinkepi.2019.e13e06

Kramer, Bianca; **Bosman, Jeroen** (2018). *Rainbow of open science practices*.
https://doi.org/10.5281/ZENODO.1147025

Martín-Martín, Alberto; **Costas, Rodrigo**; **Van-Leeuwen, Thed**; **Delgado-López-Cózar, Emilio** (2018). "Evidence of open access of scientific publications in Google Scholar: A large-scale analysis". *Journal of informetrics*, v. 12, n. 3, pp. 819-841.
https://doi.org/10.1016/j.joi.2018.06.012

Martínez-Méndez, Francisco-Javier; **López-Carreño, Rosana** (2019). "La paulatina adopción de orcid para la mejora de la identidad digital de las revistas científicas españolas en acceso abierto". *Investigación bibliotecológica*, v. 33, n. 80, p. 73.
https://doi.org/10.22201/iibi.24488321xe.2019.80.57994

Orduña-Malea, Enrique; **Delgado-López-Cózar, Emilio** (2018). "Dimensions: re-discovering the ecosystem of scientific information". *El profesional de la informacion*, v. 27, n. 2, pp. 420-431.
https://doi.org/10.3145/epi.2018.mar.21

Page, Benedict (2020). "UKRI proposes OA requirement for monographs from 2024". *The bookseller*, 13 February.
https://www.thebookseller.com/news/ukri-require-oa-monographs-2024-1191801

Rebiun (2019). "Medición del acceso abierto en las universidades españolas y el CSIC". En: *XVIII Workshop Rebiun de proyectos digitales / VIII Jornadas OS repositorios*, 25-27 de septiembre, León. Subgrupo de Acceso Abierto.
https://buleria.unileon.es/handle/10612/11230

Ruttenberg, Judy (2019). "'It's a movement, not a Club': TOME in the growing landscape of open monograph publishing". *TOME meeting*, July 22nd.
https://www.arl.org/wp-content/uploads/2019/09/2019.09.05-tome-report.pdf

Schrader, Antonia; **Grossmann, Alexander**; **Reiche, Michael**; **Böhm, David** (2020). "Open access publication workflow for academic books". *ScienceOpen Posters*.
https://doi.org/10.14293/S2199-1006.1.SOR-.PPHCU45.V3

Thelwall, Mike (2018). "Dimensions: A competitor to Scopus and the Web of Science?". *Journal of informetrics*, v. 12, n. 2, pp. 430-435.
https://doi.org/10.1016/j.joi.2018.03.006

Torres-Salinas, Daniel; **Gorraiz, Juan**; **Robinson-García, Nicolás** (2018). "The insoluble problems of books: what does Altmetric.com have to offer?". *Aslib journal of information management*, v. 70, n. 6, pp. 691-707.
https://doi.org/10.1108/AJIM-06-2018-0152

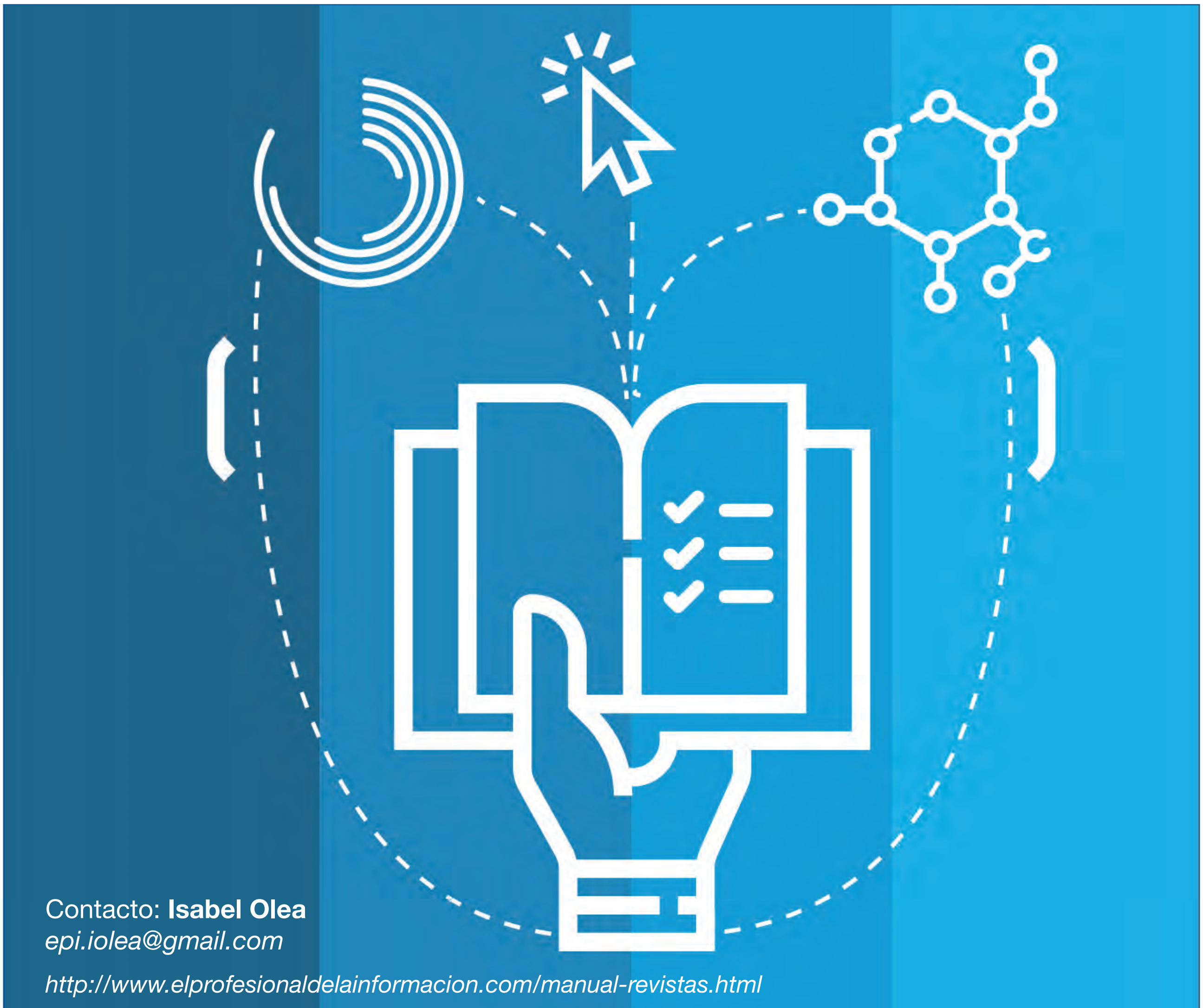
Torres-Salinas, Daniel; **Robinson-García, Nicolás**; **Gorraiz, Juan** (2017). "Filling the citation gap: measuring the multidimensional impact of the academic book at institutional level with PlumX". *Scientometrics*, v. 113, n. 3, pp. 1371-1384.
https://doi.org/10.1007/s11192-017-2539-z

Unión de Editoriales Universitarias Españolas (2020). "Convocatoria Sello de calidad en edición académica (CEA-APQ)". *Sello de calidad en edición académica (CEA-APQ)*, Unión de Editoriales Universitarias Españolas.
http://www.selloceaapq.es

Urbano, Cristóbal (2018). "Acceso abierto a libros académicos: el papel de las bibliotecas universitarias". En: Giménez-Toledo, Elea; Córdoba-Restrepo, Juan-Felipe (eds.). *Edición académica y difusión. Libro abierto en Iberoamérica*. Bogotá: Editorial Universidad del Rosario; Editorial Comares, pp. 29-60. ISBN: 9789587841688
https://doi.org/10.12804/th9789587841671.07

Van-Eck, Nees-Jan; **Waltman, Ludo**; **Larivière, Vincent**; **Sugimoto, Cassidy R.** (2018). "Crossref as a new source of citation data: A comparison with Web of Science and Scopus". *CWTS Blog*, 17 January.
https://www.cwts.nl/blog?article=n-r2s234

Waltman, Ludo (2019). *Open metadata of scholarly publications: Open science monitor case study*, Luxembourg: Publications Office of the European Union. ISBN: 978 9276120117
https://doi.org/10.2777/132318



Interacción de las instituciones de auditoría pública con los usuarios a través de los medios de comunicación social

Interaction of public audit institutions with users through social communication media

Jaime García-Rayado; Sonia Royo-Montañés; Lourdes Torres

Cómo citar este artículo:

García-Rayado, Jaime; **Royo-Montañés, Sonia**; **Torres, Lourdes** (2021). "Interacción de las instituciones de auditoría pública con los usuarios a través de los medios de comunicación social". *Profesional de la información*, v. 30, n. 1, e300109.

https://doi.org/10.3145/epi.2021.ene.09

Artículo recibido el 13-07-2020
Aceptación definitiva: 06-10-2020

Jaime García-Rayado
https://orcid.org/0000-0002-1761-4119

Universidad de Zaragoza
Facultad de Economía y Empresa
Gran Vía, 2. 50005 Zaragoza, España
jgrayado@unizar.es

Sonia Royo-Montañés ✉
https://orcid.org/0000-0001-5162-1446

Universidad de Zaragoza
Facultad de Economía y Empresa
Gran Vía, 2. 50005 Zaragoza, España
sroyo@unizar.es

Lourdes Torres
https://orcid.org/0000-0003-4623-1448

Universidad de Zaragoza
Facultad de Economía y Empresa
Gran Vía, 2. 50005 Zaragoza, España
ltorres@unizar.es

Resumen

Se analiza la interacción de las instituciones de auditoría pública con los usuarios a través de los medios de comunicación social. Además de determinar factores explicativos de la adopción de estos medios por parte de las instituciones de auditoría pública europeas centrales y regionales, se lleva a cabo un análisis comparativo de las redes sociales que más utilizan, para contestar las siguientes preguntas: ¿cómo utilizan las instituciones de auditoría pública europeas los medios de comunicación social? y ¿cuál es el nivel de seguimiento e interacción de sus usuarios? Este trabajo analiza 92 instituciones de auditoría pública europeas: 28 instituciones de auditoría centrales (*supreme audit institutions*, SAIs), 63 regionales (*regional audit institutions*, RAIs) y la *European Court of Auditors* (*ECA*). Los resultados indican que el nivel de uso de los medios de comunicación social por parte de estas instituciones es reducido, con mayores niveles de adopción en las SAIs, en los territorios con mayor número de habitantes y con estilos de administración pública anglosajón, nórdico y del Este de Europa. Los resultados también muestran que las redes sociales se utilizan principalmente para transmitir información sobre las actividades que realizan y que las publicaciones que buscan mejorar la imagen de las instituciones son las que generan una mayor repercusión en los usuarios. Las publicaciones dirigidas a comenzar un diálogo con los usuarios son las menos frecuentes. Los usuarios interaccionan más en *Facebook* que en *Twitter*, siendo los "me gusta" la reacción más común y los comentarios la menos frecuente.

Palabras clave

Redes sociales; Medios de comunicación social; Web 2.0; *Facebook*; *Twitter*; Tecnologías de la información y la comunicación; Instituciones de auditoría pública europeas; Entidades fiscalizadoras superiores; Órganos institucionales de control externo (OCEX); Estilos de administración pública; Gobierno abierto; Transparencia; e-Participación; Gestión pública.

Abstract

The interaction of public audit institutions with users through social media is analyzed. In addition to determining explanatory factors for the adoption of these platforms by supreme and regional European public audit institutions, a comparative analysis of the most commonly used social media is carried out to answer the following research questions: How do European public audit institutions use social media? What is the level of follow-up and interaction of their users? This paper analyzes 92 European public audit institutions: 28 supreme audit institutions (SAIs), 63 regional audit institutions (RAIs), and the *European Court of Auditors* (*ECA*). The results of this study indicate that the level of social media use by these institutions is low, with higher levels of adoption by SAIs and in areas with larger populations and Anglo-Saxon, Nordic, and Eastern public administration styles. The results also show that social media are mainly used to disclose information on their activities and that publications seeking to improve the image of the institutions have the greatest impact on users. Publications aimed at starting a dialogue with users are the least frequent. Users interact more on *Facebook* than on Twitter, "likes" being the most common user reaction and comments the least frequent.

Keywords

Social networks; Social media; Web 2.0; *Facebook*; *Twitter*; Information and communication technologies; European public sector audit institutions; Supreme audit Institutions; Regional audit institutions; Public administration styles; Open government; Transparency; e-Participation; Public management.

Financiación

Este trabajo ha sido financiado por los proyectos S56_20R (*Departamento de Ciencia, Universidad y Sociedad del Conocimiento del Gobierno de Aragón*) y UZ2019-SOC-05 (*Universidad de Zaragoza*).

1. Introducción

Entre las competencias de las instituciones de auditoría pública centrales –entidades Fiscalizadoras Superiores (SAIs)[1]– y regionales (RAIs)[2] se incluye la realización de auditorías de cumplimiento, financieras y operativas, cuyos informes facilitan información tanto a los usuarios internos –responsables de la toma de decisiones de las entidades públicas auditadas– como a los usuarios externos –otras instituciones, usuarios de los servicios y público en general– sobre el cumplimiento de la legalidad, la situación financiera y la gestión de las mismas, para que ésta resulte más visible, verificable y eficiente (**Barea**; 2004; **De-Fine-Licht**, 2019; **Torres**, 2002).

Para que las instituciones de auditoría puedan comunicar de forma eficaz a sus grupos de interés los contenidos de sus informes, éstos deben tener suficiente visibilidad. Para ello, pueden resultar útiles, además de los canales de comunicación tradicionales, los nuevos medios de comunicación social –*Facebook*, *Twitter*, RSS, LinkedIn, blogs…– (**Yamamoto**; **Kim**, 2019). Según *Intosai* (2013), las SAIs deberían cumplir dos principios fundamentales para marcar una diferencia en la vida de los ciudadanos: "unos niveles de transparencia y rendición de cuentas adecuados" y "una comunicación efectiva con sus grupos de interés". También la *Organización Europea de Entidades Fiscalizadoras Superiores* ("*European Organization of Supreme Audit Institutions*", *Eurosai*, 2017) reconoce la importancia de la comunicación de las SAIs con sus usuarios y grupos de interés, siendo los ciudadanos uno de dos grupos más relevantes de usuarios (*Eurosai*, 2019a). Los resultados obtenidos en una encuesta de *Eurosai* (2019a) indican que la interacción más común de las SAIs europeas con los ciudadanos es principalmente para proveerles de información sobre su actividad, aunque también buscan su interacción para planificar la auditoría, realizar su actividad y obtener retroalimentación en las auditorías realizadas. Las redes sociales y otros medios de comunicación social son herramientas útiles para estos fines, al permitir una conversación bidireccional, retroalimentación, mejorar la calidad de la auditoría y satisfacer así mejor las expectativas de la sociedad.

El objetivo de este trabajo es analizar el uso de los medios de comunicación social por parte de las instituciones de auditoría pública europeas centrales y regionales y la interacción que realizan con sus usuarios a través de estos medios. Para ello, trataremos de responder las preguntas siguientes: ¿cuál es el uso de las instituciones de auditoría europeas, SAIs y RAIs, de los principales medios de comunicación social? y ¿cuál es el nivel de seguimiento e interacción de los usuarios?

> Las instituciones de auditoría deben cumplir dos principios fundamentales para marcar una diferencia en la vida de los ciudadanos: comunicación efectiva y niveles de rendición de cuentas adecuados

Tras la introducción, en el siguiente apartado se analizan los antecedentes de la relación entre entidades públicas –incluidas las instituciones de auditoría– y los medios de comunicación social. En el apartado 3 se explica el marco teórico en el que se encuadra la investigación. A continuación, se describe la muestra y metodología utilizadas. En el apartado 5 se presentan los resultados obtenidos para cada pregunta de investigación. En último lugar, se plantea la discusión y las conclusiones de la investigación.

2. Las entidades públicas y los medios de comunicación social

Mergel (2013) define tres estrategias de uso de medios de comunicación social, que pueden ser utilizadas por las instituciones de auditoría pública: 1) Estrategia de empuje (*push*), centrada en la difusión y publicación de mensajes de forma unidireccional; 2) estrategia de atracción (*pull*) o "comprometida", que busca la interacción con la audiencia y que los usuarios compartan y creen contenidos; y 3) estrategia de red (*networking*), que fomenta que la audiencia participe activamente aportando su conocimiento y colaborando con las entidades públicas en la coproducción de servicios públicos.

Los estudios realizados hasta la fecha muestran que la adopción de las redes sociales por entidades del sector público ha sido principalmente para transmitir información y mejorar su transparencia (**Bonsón** *et al.,* 2012; **Criado**; **Villodre**, 2020; **DePaula**; **Dincelli**; **Harrison**, 2018; **Zheng**; **Zheng**, 2014), así como su imagen (**Gandía**; **Marrahí**; **Huguet**, 2016; **Gunawong**, 2015), y que su uso es todavía incipiente en la prestación de servicios (**Criado**; **Villodre**, 2020). La mayor parte de estos estudios se centran en entidades locales, que es el nivel de la Administración más próximo al ciudadano (**Agostino**, 2013; **Bonsón** *et al.*, 2012; **Bonsón**; **Royo-Montañés**; **Ratkai**, 2015; 2017; **Criado**; **Villodre**, 2018; 2020, **Estévez-Ortiz**; **García-Jiménez**; **Glösekötter**, 2016; **Gao**; **Lee**, 2017; **Haro-de-Rosario**; **Sáez-Martín**; **Caba-Pérez**, 2018; **Royo-Montañés**; **Yetano**; **García-Lacalle**, 2020; **Sáez-Martín**; **Haro-de-Rosario**; **Caba-Pérez**, 2014; **Zheng**; **Zheng**, 2014), aunque también hay estudios referidos a la Administración central o parques nacionales, entre otros (**Callejo-Gallego**; **Agudo-Arroyo**, 2019; **Gutiérrez-Barroso**; **Báez-García**; **Flores-Muñoz**, 2019).

Aunque los medios de comunicación social permiten, en general, y a las administraciones públicas en particular, una comunicación directa con los usuarios y grupos de interés, eliminando la intermediación de los medios de comunicación tradicionales, así como enviar mensajes de forma masiva y a bajo coste, incluso de forma bidireccional, posibilitando consultas y respuestas de forma instantánea (**Bertot**; **Jaeger**; **Grimes**, 2012; **Haro-de-Rosario**; **Sáez-Martín**; **Caba-Pérez**, 2018), también plantean problemas, como el exceso de información y la velocidad con la que transmiten algunas noticias falsas, sin contrastar, que, en ocasiones, pueden fomentar determinadas campañas de desinformación (*Parlamento Europeo*, 2019). Aunque gestionar la desinformación exige la cooperación de todos los agentes sociales y de una ciudadanía conocedora y comprometida con este problema, las instituciones de auditoría, como órganos independientes en la supervisión del sector público, pueden jugar un papel relevante en la lucha contra esas campañas que buscan generar desconfianza entre la ciudanía y las instituciones públicas. Pueden aportar información fidedigna e independiente basada en los informes de auditoría que elaboran. *Intosai* (2019) afirma que las SAIs tienen un rol importante para contrarrestar las noticias falsas divulgando información basada en hechos. Asimismo, la *ECA* ha puesto en marcha una iniciativa para auditar el Plan de acción de la UE contra la desinformación (*European Court of Auditors*, 2020).

Como los estudios sobre la comunicación de las instituciones de auditoría a través de las redes sociales son muy escasos, este estudio pretende aportar algo más de luz al conocimiento en este ámbito. Así, **González-Díaz**, **García-Fernández** y **López-Díaz** (2013) muestran que en 2011 solo tres SAIs (la *General Audit Office* de los EUA, la *National Audit Office* de Australia y la *Riigikontroll* de Estonia), de las 36 de la *OCDE*, usaban *Facebook* y *Twitter*. Posteriormente, **Torres**, **Royo-Montañés** y **García-Rayado** (2020) comparan la adopción de los medios de comunicación social de las instituciones de auditoría pública de EUA y de la UE, aunque sus resultados se basan únicamente en un análisis bivariante. Nuestro trabajo se centra en la interacción y respuesta de los usuarios en las redes sociales más adoptadas por las instituciones de auditoría europeas (*Facebook* y *Twitter*) y los factores explicativos del nivel de adopción de estas herramientas mediante un análisis de regresión multivariante.

3. Marco teórico

La adopción de medios de comunicación social por parte de las instituciones de auditoría puede considerarse una innovación, ya que son un nuevo canal para interactuar con diferentes grupos de usuarios, por lo que su adopción puede explicarse utilizando la teoría de la difusión de innovaciones (**Rogers**, 2003). Esta teoría estudia el proceso por el cual las innovaciones son transmitidas entre los miembros de un sistema social. La rapidez de la adopción de innovaciones dependerá de los atributos percibidos en la innovación (ventajas relativas, compatibilidad, complejidad, facilidad para probar la innovación y visibilidad de los resultados), el tipo de decisión de innovar (tomada por un individuo, de forma colectiva o por una autoridad), el medio por el que se comunica la innovación, la naturaleza del entorno y el alcance de los esfuerzos de promoción de los agentes de cambio.

Así, la rápida difusión que permiten los medios de comunicación social puede verse afectada por la percepción de las ventajas e inconvenientes de estas plataformas por parte de las instituciones de auditoría y su grado de compatibilidad con los valores y necesidades de comunicación de estas instituciones. Tradicionalmente estas entidades apenas se han relacionado con la ciudadanía y otros agentes sociales por su marcado carácter tecnocrático (**Baimyrzaeva**; **Kose**, 2014; **González**; **López**; **García**, 2008) y la necesidad de demostrar su independencia (**Triantafillou**, 2020; **Yamamoto**; **Kim**, 2020). Por ello, es razonable pensar que las entidades que pertenecen a organizaciones que fomentan el uso de estas plataformas, como *Intosai* o *Eurosai*, las adopten en mayor medida.

Por otro lado, el entorno en el que realizan su actividad las instituciones de auditoría europeas difiere en términos de estructura legal, antecedentes históricos y cultura organizacional y administrativa de cada país. Estas diferencias suelen denominarse estilos de administración pública (**Pina**; **Torres**; **Yetano**, 2009) y en Europa pueden distinguirse el anglosajón, el nórdico, el germánico, el napoleónico y el de los países del Este. Así, los países angloamericanos y nórdicos tienen una reputada tradición de reformas en el sector público y transparencia, mientras que los países germánicos y napoleónicos pertenecen a una tradición administrativa más legalista y burocrática y han sido más reticentes a la introducción de algunas reformas en el sector público. Los países de la Europa del Este han sido punteros en introducción de las TIC, en general, y de prácticas innovadoras en el uso de éstas por parte de las SAIs (*Eurosai*, 2019b).

Diversos estudios han considerado los estilos de administración pública como potenciales factores explicativos del uso y adopción de medios de comunicación social en entidades públicas (**Bonsón** *et al.*, 2012; **Bonsón**; **Royo-Montañés**; **Ratkai**, 2015; **Criado**; **Villodre**, 2020, **Gutiérrez-Barroso**; **Báez-García**; **Flores-Muñoz**, 2019; **Torres**; **Royo-Montañés**; **García-Rayado**, 2020). En concreto, a las instituciones de auditoría, que se consideran en ocasiones agentes del cambio de los procesos de reforma del sector público, aunque con variaciones considerables que dependen, en gran medida, de su tradición administrativa (**Pierre**; **Peters**; **De-Fine-Licht**, 2018, pp. 731-732), se les presupone un cierto uso de herramientas de comunicación digital, en especial por parte de las instituciones de auditoría anglosajonas, nórdicas y de los países de la Europa del Este.

> Este trabajo analiza 92 instituciones de auditoría europeas: 28 instituciones de auditoría centrales (supreme audit institutions, SAIs), 63 regionales (regional audit institutions, RAIs) y la *European Court of Auditors* (*ECA*)

4. Metodología

Este trabajo analiza 92 instituciones de auditoría pública europeas (véase el anexo 1): 28 de carácter central (las SAIs de los 28 primeros países miembros de la UE: la *Cour des Comptes*, la *National Audit Office*, el *Tribunal de Cuentas*…) y 63 de carácter regional (las RAIs existentes en esos 28 países, salvo las que actúan como subsidiarias de la central), más la *ECA*, cuya actividad y posición es similar a la de una SAI (**Pollitt**; **Summa**, 1997).

En la UE existen variaciones importantes en materia de descentralización territorial que oscilan entre países federales, como es el caso de Alemania, o cuasifederales como España, hasta otros altamente centralizados como son los países nórdicos o Francia. En estos últimos, o no existen RAIs propiamente dichas, como es el caso de los países nórdicos, o son delegaciones territoriales de la propia SAI, como en Francia. Para garantizar la comparabilidad de los casos analizados, se han excluido del análisis las instituciones que actúan como subsidiarias de la central, ya que no tienen una política de comunicación independiente.

Para responder a la primera pregunta de investigación (¿cuál es el uso de las instituciones de auditoría europeas de los principales medios de comunicación social?), se analizaron en junio de 2018 las webs oficiales de todas estas instituciones en busca de un enlace activo a redes sociales y medios de comunicación social. Se detectaron 12 plataformas (*Twitter*, RSS, *Facebook*, *YouTube*, *LinkedIn*, Blog, *Flickr*, *Instagram*, *Google+*, *SlideShare*, *Dailymotion* y *Pinterest*) usadas en mayor o menor medida por estas instituciones.

A continuación, tomando como variable dependiente el porcentaje de plataformas utilizadas sobre el total de las 12 identificadas en la fase anterior, se llevó a cabo una regresión por mínimos cuadrados ordinarios robusta a heterocedasticidad. Para determinar las variables explicativas a incluir en la regresión, previamente se realizó un análisis bivariante con las variables utilizadas con más frecuencia por la literatura previa para este tipo de análisis (**Bonsón** *et al.*, 2012; **Criado**; **Villodre**, 2018; **Gao**; **Lee**, 2017; **Torres**; **Royo-Montañés**; **García-Rayado**, 2020). Así, en cuanto a variables cuantitativas (a nivel central –país– o regional, según corresponda), se utilizaron el índice de penetración de internet (porcentaje de hogares con acceso), el porcentaje de usuarios de internet que participan cívica o políticamente publicando opiniones en redes sociales o webs, el porcentaje de individuos que interaccionaron con las instituciones públicas en los últimos 12 meses a través de internet, la penetración de las redes sociales (porcentaje de individuos que las usan en cada territorio), el número de habitantes (en logaritmo), la mediana de edad de la población, el porcentaje de mujeres en la población, la riqueza de la población (PIB per cápita) y el nivel educativo de la población (porcentaje de población con un nivel educativo superior a la secundaria, niveles de 5 a 8 de la *Clasificación Internacional Normalizada de la Educación*). Todos estos datos se obtuvieron de la *Oficina Europea de Estadística* (*Eurostat*)[3]. Las variables cualitativas que se incluyeron son el tipo de institución (SAI/RAI) y el estilo de administración pública. El análisis bivariante se realizó mediante contrastes no paramétricos, debido a la ausencia de normalidad en los datos, en concreto, correlaciones de Spearman y pruebas U de Mann-Whitney y H de Kruskal-Wallis, dependiendo del tipo de variables (cuantitativas, dicotómicas o con más de dos categorías, respectivamente).

A continuación, se analizaron las dos redes sociales más utilizadas por las instituciones de auditoría, *Facebook* y *Twitter*[4]. Los indicadores seleccionados fueron: si las instituciones permiten o no publicar a los usuarios en sus muros de *Face-*

book y, a partir de una muestra de 30 publicaciones por plataforma analizada (1.110 en total)[5], el número de publicaciones por día, el porcentaje de publicaciones elaboradas por las propias instituciones de auditoría (contenidos propios publicados por la institución o que comparten, añadiendo comentarios u opiniones adicionales) y el tipo de contenido que publican estas instituciones en redes sociales, adaptando la clasificación propuesta por **DePaula**, **Dincelli** y **Harrison** (2018) (véase el anexo 2).

Para responder a la segunda pregunta (¿cuál es el nivel de seguimiento e interacción de los usuarios?) se obtuvieron datos sobre el número de seguidores, número de seguidores por cada 1.000 habitantes, y nivel de interacción de los usuarios con las 1.110 publicaciones de *Facebook* y *Twitter* analizadas, utilizando los indicadores propuestos por **Bonsón** y **Ratkai** (2013): popularidad (basado en el número de "me gusta"), compromiso (basado en el número de comentarios), viralidad (basado en el número de veces que se comparte cada publicación, *shares*) y un indicador agregado de interacción (véase la tabla 1)[6].

La comparación de las diferencias entre *Facebook* y *Twitter* para los indicadores de los niveles de uso de las instituciones y niveles de seguimiento e interacción por parte de los usuarios se ha realizado mediante la prueba de U de Mann-Whitney. Por último, se compararon los indicadores de interacción (P3, C3, V3 y el nivel agregado de interacción) para cada tipo de publicación en *Facebook* y *Twitter*, utilizado la prueba H de Kruskal-Wallis.

Tabla 1. Indicadores de interacción

Indicadores		Fórmula	Interpretación
Popularidad	P1	(Número de publicaciones con al menos un "me gusta" / número de publicaciones) x100	Porcentaje de publicaciones con al menos un "me gusta"
	P2	Número de "me gusta" / número de publicaciones	Media del número de "me gusta" por publicación
	P3	(P2 /número de seguidores) x 1.000	Media del número de "me gusta" por publicación por cada 1.000 seguidores
Compromiso	C1	(Número de publicaciones con al menos un comentario / número de publicaciones) x100	Porcentaje de publicaciones con al menos un comentario
	C2	Número de comentarios/número de publicaciones	Media del número de comentarios por publicación
	C3	(C2 / número de seguidores) x 1.000	Media del número de comentarios por publicación por cada 1.000 seguidores
Viralidad	V1	(Número de publicaciones con al menos un *share* / número de publicaciones) x100	Porcentaje de publicaciones con al menos un *share*
	V2	Número de *shares* / número de publicaciones	Media del número *shares* por publicación
	V3	(V2 / número de seguidores) x 1.000	Media del número *shares* por publicación por cada 1.000 seguidores
Nivel agregado de interacción		P3* + C3 + V3	Índice de interacción agregado

Nota: * Para el cálculo del nivel de interacción, en la popularidad se tuvieron en cuenta todas las posibles reacciones, no solo los "me gusta".
Fuente: Adaptado de **Bonsón** y **Ratkai** (2013).

5. Resultados

5.1. Uso de los principales medios de comunicación social por parte de las instituciones de auditoría europeas

En la tabla 2 se muestra el nivel de uso de medios de comunicación social por parte de las SAI, RAI, y de forma agregada. La media del nivel de uso es de 1,1 medios por institución. El medio más utilizado es *Twitter* (28,3%), seguido de RSS (26,1%) (aunque éste solo permite comunicación unidireccional) y *Facebook* (16,3%).

El nivel de uso por parte de las SAIs es muy superior al de las RAIs (media de 2,4 *versus* 0,5 medios por institución), sobre todo en los medios más utilizados (*Twitter*, RSS y *Facebook*). Las instituciones europeas que utilizan más medios a nivel central y regional son la "*Cour des Comptes*" (SAI de Francia) y la "*Audit Office of Scotland*" (RAI de Escocia), con 7 y 6 medios, respectivamente.

La imagen 1 muestra los distintos niveles de uso (porcentaje de plataformas utilizadas sobre el total de las 12 identificadas en la fase anterior) de las instituciones analizadas. En términos generales, se observa que los países

Tabla 2. Nivel de uso de medios de comunicación social

	SAIs	RAIs	Total
Twitter	51,7%	17,5%	28,3%
RSS	48,3%	15,9%	26,1%
Facebook	44,8%	3,2%	16,3%
YouTube	37,9%	3,2%	14,1%
LinkedIn	27,6%	7,9%	14,1%
Blog	6,9%	3,2%	4,3%
Flickr	10,3%	0,0%	3,3%
Instagram	3,4%	0,0%	1,1%
Google+	6,9%	0,0%	2,2%
SlideShare	3,4%	0,0%	1,1%
Dailymotion	3,4%	0,0%	1,1%
Pinterest	0,0%	1,6%	1,1%
Media	2,4	0,5	1,1
N	29	63	92
Min.	0	0	0
Max.	7	6	7

Nota: El número de SAIs es 29 porque incluye la *ECA*.

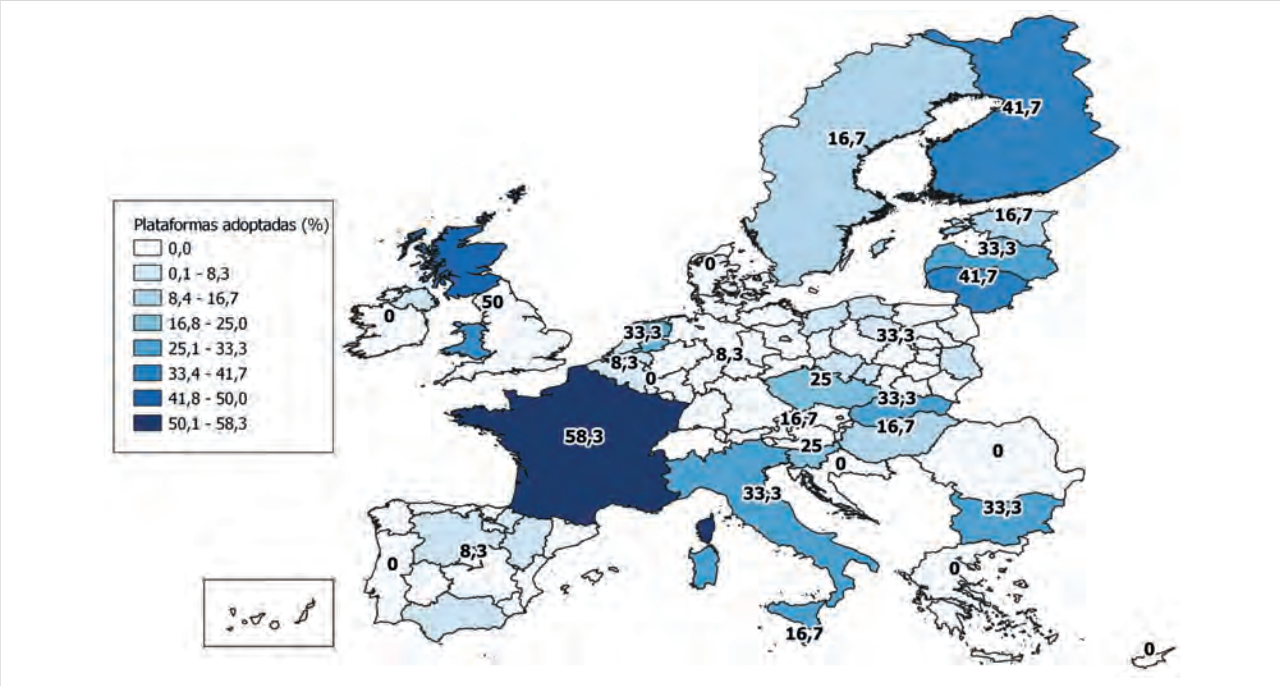


Imagen 1. Nivel de uso de medios de comunicación social
Nota: Los porcentajes que aparecen en el mapa muestran el nivel de de adopción de las SAIs. En caso de existir RAIs, los porcentajes de adopción de estas entidades deben interpretarse según la escala de color que figura en la leyenda. En caso de que el pais no tenga RAIs independientes (por ejemplo, Francia e Italia, entre otros), el color representa el porcentaje de plataformas adoptadas por la SAI.

de estilo de administración pública anglosajón, nórdico y de la Europa del Este parecen tener mayores niveles de adopción. Sin embargo, hay excepciones importantes, como Francia (cuya SAI tiene el mayor índice de adopción) y Dinamarca (cuya SAI no utiliza ninguna herramienta), por lo que es evidente que el estilo de administración pública no es el único elemento diferenciador.

El análisis bivariante previo al análisis de regresión (véase el anexo 3) identificó la existencia de relaciones positivas significativas entre la población y la penetración de las redes sociales con el índice de adopción de medios de comunicación social. También se encontraron diferencias significativas en el índice de adopción según el estilo de administración pública (mayor en instituciones anglosajonas, nórdicas y de países del Este) y el tipo de institución (mayor en las SAIs).

En base a los resultados del análisis bivariante se ha estimado la Regresión 1 (véase la tabla 3), utilizando como variables independientes la población, la penetración de las redes sociales, el tipo de institución (SAI/RAI) y 4 variables *dummies* representativas de los estilos de administración pública (el estilo de referencia es el germánico), obteniéndose que el nivel de adopción en las instituciones de estilo napoleónico no es significativamente distinto del germánico y que la penetración de las redes sociales tampoco es individualmente significativa. En consecuencia, se estima la Regresión 2 (véase la tabla 3) que no incluye estas dos variables por no ser individualmente significativas.

Tabla 3. Factores explicativos del nivel de adopción

	Regresión 1		**Regresión 2**	
	Coeficiente	**VIF**	**Coeficiente**	**VIF**
Constante	-30,162		-33,494*	
Ln(población)	2,290*	1,434	2,355*	1,377
SAI/RAI	9,414**	1,649	10,345**	1,418
Anglosajón	26,691**	1,667	24,162**	1,064
Países del Este	7,731*	1,589	5,318*	1,178
Nórdico	12,237*	2,248	9,780**	1,103
Napoleónico	3,087	1,627		
Penetración de las redes sociales	-0,066	2,303		
R^2	0,470		0,466	
R^2 corregido	0,422		0,435	
F	9,764**		14,863**	
N	91		91	
Notas: ** p-valor < 0,01; * p-valor < 0,05				

Las variables independientes incluidas en la Regresión 2 (población, SAI/RAI y estilos de administración pública anglosajón, nórdico y de países del Este) son individual y conjuntamente significativas, no presentan problemas de multicolinealidad y explican un 46,6% del nivel de uso de medios de comunicación social por parte de las instituciones de auditoría pública europeas. Las diferencias en los niveles de adopción de instituciones anglosajonas y de países del Este (F = 3,25; p-valor = 0,07), anglosajonas y nórdicas (F = 1,75; p-valor = 0,19), y nórdicas y de países de la Europa del Este (F = 1,27; p-valor = 0,26) no son estadísticamente significativas al 5%. No obstante, las diferencias entre el índice de adopción de las instituciones de estos tres estilos y las de los estilos germánico y napoleónico sí son estadísticamente significativas.

> El nivel de adopción medio es de 1,1 plataformas por institución, siendo el de las SAIs muy superior al de las RAIs (2,4 *versus* 0,5 plataformas por institución)

Para analizar el uso de las instituciones de auditoría de las dos redes sociales más adoptadas, *Facebook* y *Twitter*, se incluyen en la tabla 4 los indicadores más relevantes. El número medio de publicaciones por día no es significativamente diferente entre *Facebook* y *Twitter* (U Mann-Whitney = 127,5; p-valor > 0,05). La frecuencia con la que realizan publicaciones es de una publicación cada dos días, de media, en *Facebook* y una publicación diaria en *Twitter*, aunque la muestra presenta una heterogeneidad elevada. El mayor número de publicaciones diarias es el de la "*Wales Audit Office*" (2,73 en *Facebook* y 3,75 en *Twitter*), que estaba realizando la campaña de consulta "*Shape our audits*", con comunicación a través de las redes sociales durante el periodo de recogida de datos:
https://www.audit.wales/news/help-shape-our-audits-and-topics-we-choose

El porcentaje de publicaciones elaboradas por las propias instituciones es significativamente superior en *Facebook* (U Mann-Whitney = 270; p-valor < 0,01). Todas las instituciones elaboran el contenido de al menos la mitad de sus publicaciones y un 60% de las páginas de *Facebook* de estas instituciones permite a los usuarios publicar en su muro.

Tabla 4. Uso de *Facebook* y *Twitter* por las instituciones de auditoría europeas

	N	Publicaciones por día			% de contenido propio			Permiten publicar a los usuarios	
		Media	Mediana	Desv.	Media	Mediana	Desv.	Sí	No
Facebook	15	0,5	0,3	0,66	96,9%	100,0%	0,11	60%	40%
Twitter	22	1,1	0,4	1,21	87,3%	93,3%	0,12	-	-

En la tabla 5 se recoge el porcentaje de cada tipo de publicaciones de la muestra, con diferencias significativas entre *Facebook* y *Twitter* (Chi-cuadrado = 46,320; p-valor < 0,01). Casi todas las publicaciones de las instituciones de auditoría se utilizan para transmitir información (84,7%), especialmente para dar difusión a sus informes de auditoría (en torno al 50%), siendo en esta categoría el porcentaje de publicaciones superior en *Twitter* (88,3%) debido a que utilizan más esta plataforma para publicitar eventos, conferencias y otras actividades de estas instituciones (37,3% en *Twitter* frente al 24% en *Facebook*, de media). El segundo uso más frecuente de estas herramientas por parte de estas instituciones es de tipo promocional (uso simbólico), con un 7,4% del total de publicaciones (11,1% en *Facebook versus* 4,8% en *Twitter*); en concreto, las publicaciones dedicadas a mejorar la imagen suponen el 6,1%.

Tabla 5. Tipo de publicaciones realizadas por las instituciones de auditoría

	Facebook **%**	***Twitter*** **%**	**Total %**
Provisión de información	**79,3**	**88,3**	**84,7**
Informes de auditoría	51,3	50,0	50,5
Eventos y otras actividades	24,0	37,3	31,9
Información de interés público	4,0	1,1	2,3
Búsqueda de input	**2,4**	**1,5**	**1,9**
Información de los ciudadanos	2,2	1,5	1,8
Recaudación de fondos	0,2	0,0	0,1
Dialogo online/interacción presencial	**7,1**	**5,3**	**6,0**
Dialogo online	0,0	0,0	0,0
Dialogo presencial	0,2	0,0	0,1
Ofertas de trabajo y exámenes	6,9	5,3	5,9
Uso simbólico	**11,1**	**4,8**	**7,4**
Presentación favorable/imagen	8,7	4,4	6,1
Otros actos simbólicos	2,4	0,5	1,3
Total	100	100	100
Número de publicaciones	450	660	1.110

Las publicaciones que buscan una comunicación bidireccional entre la institución y los usuarios ("búsqueda de input" y "diálogo online/interacción presencial") son las menos frecuentes, aunque las relativas a ofertas de trabajo representan el 6,9% de las publicaciones en *Facebook* y el 5,3% en *Twitter*. Ninguna de las publicaciones analizadas supone una respuesta de las instituciones de auditoría a comentarios de los usuarios.

5.2. Seguimiento e interacción de los usuarios

El nivel de seguimiento medio de las cuentas de *Facebook* y *Twitter* de las instituciones de auditoría pública europeas es de menos de 1 seguidor por cada mil habitantes, aunque la desviación típica muestra una elevada variabilidad en estos valores medios (véase la tabla 6)[7]. Las instituciones con mayor seguimiento son el "*Riigikontroll*" (SAI de Estonia) con 3,1 seguidores por cada 1.000 habitantes en su cuenta de *Facebook* y la "*National Audit Office*" de Reino Unido con 2 seguidores por cada 1.000 habitantes en su cuenta de *Twitter*.

Tabla 6. Niveles de seguimiento en *Facebook* y *Twitter*

	N	Seguidores			Seguidores / 1.000 habitantes		
		Media	Mediana	Desviación	Media	Mediana	Desviación
Facebook	15	1.919,8	691	2.445,5	0,4	0,1	0,79
Twitter	22	11.037,8	874	30.934,6	0,4	0,2	0,55

Como puede verse en la tabla 7, el porcentaje de publicaciones que recibe al menos un "me gusta" (P1) es superior al 70% en ambas plataformas, siendo significativamente mayor en *Facebook*. (U Mann-Whitney = 240,5; p-valor < 0,05). El porcentaje de publicaciones que son compartidas al menos una vez (V1), está en torno al 65% y no muestra diferencias significativas entre ambas plataformas (U Mann-Whitney = 140,0; p-valor > 0,10). También es elevado el porcentaje de los tweets que reciben al menos un comentario (C1 de *Twitter* del 79%) pero no en el caso de *Facebook* (20% de media), siendo esta diferencia entre las plataformas significativa (U Mann-Whitney = 37,0; p-valor < 0,05).

Tabla 7. Nivel de interacción de los usuarios en *Facebook* y *Twitter*

		P1	P2	P3	C1	C2	C3	V1	V2	V3	E
Facebook	Media	86%	10,2	15,80	20%	0,50	0,40	63%	3,30	3,90	20,10
	Mediana	100%	9,10	8,90	17%	0,20	0,30	70%	2,10	2,60	12,20
	Desv.	0,27	7,29	25,37	0,16	0,57	0,67	0,26	2,81	3,79	29,17
Twitter	Media	73%	4,10	7,50	79%	0,10	0,10	68%	3,80	4,50	12,00
	Mediana	85%	3,30	3,20	100%	0,00	0,00	73%	2,30	2,20	5,36
	Desv.	0,25	3,76	14,36	0,34	0,31	0,25	0,27	5,40	7,09	22,01
Nota: N = 450 publicaciones para *Facebook* y 660 para *Twitter*											

Las publicaciones de las instituciones de auditoría europeas presentan un nivel de interacción agregada (E) superior al reportado por **Bonsón**, **Royo-Montañés** y **Ratkai** (2015) para entidades locales en Europa (20,1 *versus* 12,1), siendo significativamente superior en *Facebook* que en *Twitter* (U Mann-Whitney = 227; p-valor = 0,056). Esta diferencia se debe sobre todo a una mayor popularidad en términos relativos (P3) de las publicaciones en *Facebook* de estas instituciones (U Mann-Whitney = 245; p-valor < 0,05). Las diferencias en la viralidad de las publicaciones en términos relativos (V3) no son estadísticamente significativas en *Facebook* y *Twitter* (U Mann-Whitney = 187,5; p-valor > 0,10) y el nivel de compromiso en términos relativos (C3) es reducido en ambas redes sociales (0,4 comentarios por publicación por cada 1.000 seguidores en *Facebook* y 0,1 en *Twitter*). Estos resultados indican que, aunque los usuarios presentan una mayor interacción que la que se ha encontrado en otras organizaciones públicas, la interacción más frecuente es la que supone una menor implicación por parte de los usuarios (los "me gusta"). El tipo de interacción que puede aumentar el alcance del mensaje ("compartir las publicaciones") es menos utilizado y el que puede aportar una mayor información para mejorar la actividad de la institución o comenzar un diálogo ("comentar") es marginal.

En la tabla 8 se muestran los niveles de interacción según los distintos tipos de publicaciones[8]. En ambas redes sociales las publicaciones que generan una mayor interacción agregada (E) son las dirigidas a mejorar la imagen de la entidad ("Uso simbólico") sobre todo las relativas a otros actos simbólicos, que son las más populares (P3) en ambas redes.

En cuanto a los valores de interacción de las publicaciones que buscan una comunicación bidireccional ("Búsqueda de input" y "Diálogo online/interacción presencial"), las publicaciones referidas a las ofertas de trabajo y exámenes son las más virales (V3) en *Facebook*. Los valores del resto de temáticas en estas categorías no pueden considerarse representativos por el reducido número de publicaciones encontradas.

Las publicaciones relativas a la provisión de información son las más numerosas, como se ha visto en la sección anterior y, sin embargo, los niveles de interacción que generan no son muy relevantes. Resulta llamativo que, entre este tipo de publicaciones, las relativas a la actividad principal de las instituciones, los informes de auditoría, generen una interacción con los usuarios bastante inferior a los eventos, conferencias y otras actividades de las instituciones de auditoría.

> Las publicaciones que generan una mayor respuesta son las dirigidas a mejorar la imagen de la entidad, mientras que las publicaciones que informan sobre la actividad principal de estas instituciones (auditorías realizadas) generan menos interacción

Tabla 8. Niveles de interacción según tipo de publicación

	Facebook				*Twitter*			
Tipo de publicación	**P3**	**C3**	**V3**	**E**	**P3**	**C3**	**V3**	**E**
Provisión de información	**15,0**	**0,4**	**3,1**	**18,8**	**7,0**	**0,1**	**4,4**	**11,5**
Informes de auditoría	8,0	0,3	2,4	11,1	3,4	0,0	2,6	6,0
Eventos y otras actividades	30,9	0,7	4,8	36,8	11,9	0,2	7,0	19,1
Información de interés público	8,7	0,0	1,5	10,3	3,7	0,0	4,5	8,2
Búsqueda de input	**3,5**	**0,2**	**3,5**	**7,6**	**0,2**	**0,0**	**0,8**	**0,9**
Información de los ciudadanos	2,5	0,2	3,6	6,3	0,2	0,0	0,8	0,9
Recaudación de fondos	13,6	0,0	3,4	20,4	-	-	-	-
Dialogo online / interacción presencial	**10,0**	**0,6**	**9,9**	**20,7**	**3,9**	**0,4**	**4,0**	**8,3**
Dialogo online	-	-	-	-	-	-	-	-
Dialogo presencial	24,3	1,4	8,6	35,7	-	-	-	-
Ofertas de trabajo y exámenes	9,5	0,5	9,9	20,2	3,9	0,4	4,0	8,3
Uso simbólico	**28,4**	**0,8**	**5,6**	**35,7**	**22,3**	**0,2**	**6,3**	**28,7**
Presentación favorable/imagen	19,7	0,2	4,6	25,0	21,7	0,2	6,6	28,5
Otros actos simbólicos	59,4	2,8	9,2	73,7	27,6	0,0	2,9	30,4
Número de publicaciones	450				660			

6. Discusión y conclusiones

Esta investigación ha analizado la utilización de los medios de comunicación social por parte de las instituciones de auditoría públicas europeas, y los niveles de seguimiento e interacción de los usuarios en las dos redes sociales más utilizadas (*Facebook* y *Twitter*). Algunas de estas instituciones utilizan un único medio (principalmente RSS) y la gran mayoría no utiliza ninguno, resultados acordes con la división de instituciones de auditoría propuesta por **Van-Acker** y **Bouckaert** (2019, p. 66) entre instituciones con una estrategia de comunicación notable e instituciones que tratan de evitar la atención de forma intencionada. Este interés por evitar la atención de los medios y la interacción con los usuarios por parte de un gran número de instituciones de auditoría podría explicarse por un excesivo celo a la hora de demostrar su independencia. Podría ser el caso del SAI de Dinamarca (**Triantafillou**, 2020) que, a pesar de pertenecer a un estilo de administración pública más favorable a la adopción de estas plataformas, no utiliza ninguna de ellas.

> El nivel medio de seguimiento de las RRSS es bajo, de menos de un seguidor por cada mil habitantes

La lenta adopción por parte de la mayoría de las instituciones de auditoría pública europeas en comparación con las entidades locales (**Bonsón**; **Royo-Montañés**; **Ratkai**, 2017; **Royo-Montañés**; **Yetano**; **García-Lacalle**, 2020) podría reflejar también que estas instituciones no perciben grandes ventajas en su uso o que incluso las pueden consideran contraproducentes en el contexto de sus valores y necesidades de comunicación, aunque esta posición ya no es acorde con las recomendaciones crecientes para la utilización de las redes sociales por parte de las organizaciones internacionales de auditoría pública como *Intosai* y *Eurosai*.

El análisis realizado demuestra que el estilo de administración pública, el tipo de institución (central o regional) y el tamaño de la población son factores explicativos de los distintos niveles de adopción de los medios de comunicación social. Los estilos de administración pública que tradicionalmente han sido más innovadores (el anglosajón y el nórdico) junto con los países de la Europa del Este, pioneros en materia de desarrollo de nuevas tecnologías, parecen conformar un entorno que favorece una mayor adopción de estas herramientas. En términos generales, las instituciones de auditoría de estos territorios tienen mayores niveles de adopción que las pertenecientes a los estilos napoleónico y germánico, aunque existen algunas excepciones, como la "*Cour des Comptes*" de Francia que, pese a pertenecer al estilo napoleónico, presenta el mayor número de plataformas adoptadas.

El hecho de que los medios de comunicación social permitan la comunicación masiva con los grupos de interés a un bajo coste puede justificar que las instituciones que más las usan sean las que desarrollan su actividad en territorios con un mayor número de habitantes. Este estudio así lo corrobora, al haber encontrado que el tamaño de la población es un factor explicativo del nivel de adopción de estas plataformas. La mayor parte de las SAI analizadas en este estudio forman parte de las organizaciones supranacionales *Intosai* y *Eurosai*, que han destacado la importancia de la comunicación con los usuarios para la actividad de las instituciones de auditoría. Además, *Eurosai* propuso estrategias y factores a tener en cuenta en la comunicación a través de estas plataformas en una "Hoja de ruta para que las SAIs alcancen sus objetivos de comunicación" (*Eurosai*, 2017). De acuerdo con la teoría de la difusión de innovaciones, estas organizaciones supranacionales pueden considerase agentes de cambio que fomentan la mejora de comunicación y señalan las posibilidades de los medios de comunicación social, lo cual contribuye a explicar los mayores niveles de adopción por parte de las SAIs.

Tal como indican **Pierre** y **De-Fine-Licht** (2019), aunque las normas de *Intosai* no son de obligado cumplimiento para las instituciones miembro, éstas parecen fuertemente comprometidas en la implementación de sus recomendaciones.

Las instituciones de auditoría pública europeas realizan pocas publicaciones por día en *Twitter* y *Facebook*, en comparación con los resultados de estudios anteriores en otras entidades públicas (**Bonsón**; **Royo-Montañés**; **Ratkai**, 2017; **Sáez-Martín**; **Haro-de-Rosario**; **Caba-Pérez**, 2014). Estas instituciones utilizan las redes sociales principalmente para transmitir información relacionada con sus informes de auditoría, así como con eventos y publicaciones de tipo promocional o que buscan mejorar la imagen de la institución. Las instituciones de auditoría pública europeas están utilizando una estrategia de empuje o representativa (**Mergel**, 2013) para mejorar su visibilidad y apenas buscan comunicación bidireccional con los usuarios, lo que refleja que, en términos generales, no creen que la información que los usuarios les puedan aportar sea valiosa o que carecen de los medios necesarios para tratar de implicar más a la ciudadanía. No obstante, la mayor parte de las instituciones de auditoría que utilizan *Facebook* dan muestra de un considerable nivel de apertura, al tener el muro abierto a publicaciones realizadas por los usuarios.

El nivel de seguimiento de estas redes sociales por parte de la población es muy bajo (alrededor de 0,4 seguidores por cada 1.000 habitantes), aunque los seguidores de *Facebook* de estas instituciones interaccionan más que los de entidades locales (**Bonsón**; **Royo-Montañés**; **Ratkai**, 2015; 2017), lo cual es un indicador de las posibilidades que este tipo de herramientas ofrecen a las instituciones de auditoría para mejorar sus niveles de interacción con agentes externos.

Twitter es la herramienta más adoptada por estas instituciones, aunque los niveles de interacción por parte de los usuarios son mayores en *Facebook* (análisis previos en entidades locales también han concluido que *Facebook* favorece la interacción por parte de los ciudadanos, por ejemplo, **Haro-de-Rosario**; **Sáez-Martín**; **Caba-Pérez**, 2018; **Molinillo** *et al.*, 2019). Ello vuelve a poner de manifiesto que las instituciones de auditoría pública europeas no parecen muy interesadas por el momento en recibir información de los ciudadanos. Si esta tendencia cambiara, sería muy útil combinar el uso de varias plataformas para llegar a un mayor número de grupos de interés y aumentar así sus posibilidades de recibir retroalimentación.

> *Twitter* es la red más adoptada por estas instituciones, aunque los niveles de interacción por parte de los usuarios son mayores en *Facebook*, lo que pone de manifiesto que no parecen muy interesadas por el momento en recibir información de los ciudadanos

Los usuarios de estas instituciones están respondiendo a través de las redes sociales mediante la forma de interacción más básica (los "me gusta"), que no generan retroalimentación aprovechable para la mejora de la actividad de las mismas. Modificar la estrategia de las instituciones de auditoría pública, más allá de la búsqueda de la trasparencia y rendición de cuentas, podría generar una mayor comunicación bidireccional, siempre que ello sea acorde con los objetivos de estas instituciones, ya que las publicaciones en redes sociales que mayor interacción generan no están relacionadas con su actividad principal, los informes de auditoría, y guiarse por estos indicadores podría desalinear la comunicación con los usuarios del objetivo de la institución.

Estudios futuros podrían analizar la estrategia seguida por las instituciones que cuentan con un mayor número de seguidores, como la "*Cour des Comptes*" de Francia que, puede aportar, además, experiencias innovadoras en comunicación externa y datos abiertos, y que ha desarrollado software específico basado en el uso de la inteligencia artificial para filtrar, etiquetar y visualizar las contribuciones de los ciudadanos (*Eurosai*, 2019b; 2019c). Futuros trabajos también podrían centrarse en ampliar el número de publicaciones analizadas en cada cuenta para obtener una visión más global y más conclusiones acerca del valor e intencionalidad de las contribuciones de los usuarios, así como en la realización de encuestas o entrevistas para conocer de primera mano la opinión de los responsables de estas instituciones acerca del uso de estas herramientas y el porqué de las estrategias adoptadas.

7. Notas

1. *Supreme audit institutions* (SAIs), en términos de la *Organización Internacional de las Entidades Fiscalizadoras Superiores* (*International Organization of Supreme Audit Institutions*, *Intosai*).

2. *Regional audit institutions* (RAIs), que en el caso español se denominan Órganos institucionales de control externo (OCEX).

3. Referidos a 2017, excepto la población de Escocia y Gales, obtenida de la *Office for National Statistics*, referida a 2016.

4. A pesar de su uso, RSS no se incluyó porque no permite una comunicación bidireccional con los usuarios.

5. Este número permite asegurar que las instituciones no se encuentran al inicio del uso de la red social e incluir suficientes instituciones como para realizar las comparaciones entre plataformas. Las publicaciones más recientes son del 25 de mayo de 2018, 15 días antes del comienzo de la recogida de los datos, para asegurar que los usuarios hubieran tenido tiempo suficiente para interactuar con las publicaciones.

6. Para *Facebook*, el número de "me gusta", comentarios y shares de las publicaciones de la muestra se extrajo el 10 de junio de 2018 utilizando *Netvizz* (una aplicación para extraer información estandarizada de *Facebook*). El resto de infor-

mación de *Facebook* (número de publicaciones por día, porcentaje de publicaciones propias, si se permite publicar a los usuarios en el muro y el número de seguidores) se extrajo directamente de las cuentas oficiales de las instituciones de auditoría entre el 11 y el 13 de junio de 2018. Los datos de *Twitter* se obtuvieron directamente de las cuentas oficiales de las instituciones de auditoría entre el 25 y 27 de junio de 2018. Seis cuentas de *Twitter* fueron excluidas del análisis debido a que contaban con menos de 30 publicaciones.

7. No se encontraron diferencias significativas en los niveles de seguimiento totales (U Mann-Whitney = 164,0; p-valor > 0,10) o relativos (U Mann-Whitney = 137,0; p-valor > 0,10) entre ambas redes sociales.

8. Según la prueba H de Kruskal-Wallis, los niveles de interacción por tipo de publicación son significativamente distintos en *Facebook* y en *Twitter* para todos los tipos de interacción (p-valor < 0,01) salvo para los comentarios (C3, p-valor > 0,10).

7. Bibliografía

Agostino, Deborah (2013). "Using social media to engage citizens: A study of Italian municipalities". *Public relations review*, v. 39, n. 3, pp. 232-234.
https://doi.org/10.1016/j.pubrev.2013.02.009

Barea, José (2004). "La necesidad de transparencia en la gestión pública". *Auditoría pública*, n. 33, pp. 13-24.
http://asocex.es/wp-content/uploads/PDF/200407_33_13.pdf

Bertot, John-Carlo; **Jaeger, Paul T.**; **Grimes, Justin M.** (2012). "Promoting transparency and accountability through ICTs, social media, and collaborative e-government". *Transforming government: People, process and policy*, v. 6, n. 1, pp. 78-91.
https://doi.org/10.1108/17506161211214831

Bonsón, Enrique; **Ratkai, Melinda** (2013). "A set of metrics to assess stakeholder engagement and social legitimacy on a corporate Facebook page". *Online information review*, v. 37, n. 5, pp. 787-803.
https://doi.org/10.1108/OIR-03-2012-0054

Bonsón, Enrique; **Royo-Montañés, Sonia**; **Ratkai, Melinda** (2015). "Citizens' engagement on local governments' Facebook sites. An empirical analysis: The impact of different media and content types in western Europe". *Government information quarterly*, v. 32, n. 1, pp. 52-62.
https://doi.org/10.1016/j.giq.2014.11.001

Bonsón, Enrique; **Royo-Montañés, Sonia**; **Ratkai, Melinda** (2017). "Facebook practices in Western European municipalities: An empirical analysis of activity and citizens' engagement". *Administration & society*, v. 49, n. 3, pp. 320-347.
https://doi.org/10.1177/0095399714544945

Bonsón, Enrique; **Torres, Lourdes**; **Royo-Montañés, Sonia**; **Flores, Francisco** (2012). "Local e-government 2.0: Social media and corporate transparency in municipalities". *Government information quarterly*, v. 29, n. 2, pp. 123-132.
https://doi.org/10.1016/j.giq.2011.10.001

Callejo-Gallego, Javier; **Agudo-Arroyo, Yolanda** (2019). "Análisis cuantitativo y cualitativo de la audiencia de las cuentas del Estado español en *Facebook* y *Twitter*". *El profesional de la información*, v. 28, n. 5, e280519.
https://doi.org/10.3145/epi.2019.sep.19

Criado, J. Ignacio; **Villodre, Julián** (2018). "Comunicando datos masivos del sector público local en redes sociales. Análisis de sentimiento en *Twitter*". *El profesional de la información*, v. 27, n. 3, pp. 614-623.
https://doi.org/10.3145/epi.2018.may.14

Criado, J. Ignacio; **Villodre, Julián** (2020). "Delivering public services through social media in European local governments. An interpretative framework using semantic algorithms". *Local government studies*, online first.
https://doi.org/10.1080/03003930.2020.1729750

De-Fine-Licht, Jenny (2019). "The role of transparency in auditing". *Financial accountability and management*, v. 35, n. 3, pp. 233-245.
https://doi.org/10.1111/faam.12193

DePaula, Nic; **Dincelli, Ersin**; **Harrison, Teresa M.** (2018). "Toward a typology of government social media communication: Democratic goals, symbolic acts and self-presentation". *Government information quarterly*, v. 35, n. 1, pp. 98-108.
https://doi.org/10.1016/j.giq.2017.10.003

Estévez-Ortiz, Francisco-José; **García-Jiménez, Antonio**; **Glösekötter, Petter** (2016). "An application of people's sentiment from social media to smart cities". *El profesional de la información*, v. 25, n. 6, pp. 851-858.
https://doi.org/10.3145/epi.2016.nov.02

European Court of Auditors (2020). *EU action plan against disinformation*. March 2020.
https://www.eca.europa.eu/Lists/ECADocuments/AP20_04/AP_Disinformation_EN.pdf

Eurosai (2017). *A roadmap for reaching supreme audit institution communication goals.*
https://www.eurosai.org/handle404?exporturi=/export/sites/eurosai/.content/documents/strategic-plan/goal-team-1/Roadmap-for-Reaching-SAI-Communication-Goals.pdf

Eurosai (2019a). *Guideline on the social utilisation and transparency of public sector audits.*
https://www.eurosai.org/handle404?exporturi=/export/sites/eurosai/.content/documents/ESP_2017_2023/Gui_soc_ut_tra_psa.pdf

Eurosai (2019b). *Eurosai innovations*. April 2019.
https://www.eurosai.org/export/sites/eurosai/.content/documents/about-us/INNOVATIONS-_NEWSLETTER_No-2_2019_04.pdf

Eurosai (2019c). *Eurosai innovations*. August 2019.
https://www.eurosai.org/export/sites/eurosai/.content/documents/ESP_2017_2023/SG1/Innovations-in-EUROSAI_No-3_2019-08.pdf

Gandía, Juan L.; **Marrahí, Lucía**; **Huguet, David** (2016). "Digital transparency and web 2.0 in Spanish city councils". *Government information quarterly*, v. 33, n. 1, pp. 28-39.
https://doi.org/10.1016/j.giq.2015.12.004

Gao, Xian; **Lee, Jooho** (2017). "E-government services and social media adoption: Experience of small local governments in Nebraska State". *Government information quarterly*, v. 34, n. 4, pp. 627-634.
https://doi.org/10.1016/j.giq.2017.09.005

González-Díaz, Belén; **García-Fernández, Roberto**; **López-Díaz, Antonio** (2013). "Communication as a transparency and accountability strategy in supreme audit institutions". *Administration & society*, v. 45, n. 5, pp. 583-609.
https://doi.org/10.1177/0095399712438376

Gunawong, Panom (2015). "Open government and social media: A focus on transparency". *Social science computer review*, v. 33, n. 5, pp. 587-598.
https://doi.org/10.1177/0894439314560685

Gutiérrez-Barroso, Josué; **Báez-García, Alberto-Javier**; **Flores-Muñoz, Francisco** (2019). "Emerging practices in Facebook at national parks". *Scientific annals of economics and business*, v. 66, n. 4, pp. 573-595.
https://doi.org/10.47743/saeb-2019-0041

Haro-de-Rosario, Arturo; **Sáez-Martín, Alejandro**; **Caba-Pérez, María-Carmen** (2018). "Using social media to enhance citizen engagement with local government: Twitter or Facebook?". *New media & society*, v. 20, n. 1, pp. 29-49.
https://doi.org/10.1177/1461444816645652

Intosai (2013). *ISSAI 12: The value and benefits of supreme audit institutions - making a difference to the lives of citizens.* Vienna: Intosai.
https://www.nku.gov.sk/documents/10272/1273416/ISSAI+12+-+The+vaule+and+benefits+of+the+SAIs.pdf

Intosai (2019). *Research project on improving the visibility of SAI's work: Communicating environmental audit results.*
https://wgea.org/media/113684/21a-wgea_visibility_18-sep-2019-rev.pdf

Mergel, Ines (2013). "Social media adoption and resulting tactics in the U.S. federal government". *Government information quarterly*, v. 30, n. 2, pp. 123-130.
https://doi.org/10.1016/j.giq.2012.12.004

Molinillo, Sebastián; **Anaya-Sánchez, Rafael**; **Morrison, Alastair M.**; **Coca-Stefaniak, J. Andres** (2019). "Smart city communication via social media: Analysing residents' and visitors' engagement". *Cities*, v. 94, pp. 247-255.
https://doi.org/10.1016/j.cities.2019.06.003

Parlamento Europeo (2019). *Disinformation and propaganda - Impact on the functioning of the rule of law in the EU and its Member States*.
https://www.europarl.europa.eu/thinktank/es/document.html?reference=IPOL_STU%282019%29608864

Pierre, Jon; **De-Fine-Licht, Jenny** (2019). "How do supreme audit institutions manage their autonomy and impact? A comparative analysis". *Journal of European public policy*, v. 26, n. 2, pp. 726-739.
https://doi.org/10.1080/13501763.2017.1408669

Pierre, Jon; **Peters, B. Guy**; **De-Fine-Licht, Jenny** (2019). "Is auditing the new evaluation? Can it be? Should it be?". *International journal of public sector management*, v. 31, n. 6, pp. 226-245.
https://doi.org/10.1108/IJPSM-08-2017-0219

Pina, Vicente; **Torres, Lourdes**; **Yetano, Ana** (2009). "Accrual accounting in EU local governments: One method, several approaches". *European accounting review*, v. 18, n. 4, pp. 765-807.
https://doi.org/10.1080/09638180903118694

Pollitt, Christopher; **Summa, Hilkka** (1997). "Reflexive watchdogs? How supreme audit institutions account for themselves". *Public administration*, v. 75, n. 2, pp. 313-336.
https://doi.org/10.1111/1467-9299.00063

Rogers, Everett M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press. ISBN: 978 0 743222099

Royo-Montañés, Sonia; **Yetano, Ana**; **García-Lacalle, Javier** (2020). "Transparency in the Web 2.0 era. An analysis of the use of websites and social media by Spanish municipalities". *Revista de contabilidad - Spanish accounting review*, v. 23, n. 2, pp. 263-276.
https://doi.org/10.6018/rcsar.371951

Sáez-Martín, Alejandro; **Haro-de-Rosario, Arturo**; **Caba-Pérez, Carmen** (2014). "A vision of social media in the Spanish smartest cities". *Transforming government: People, process and policy*, v. 8, n. 4, pp. 521-544.
https://doi.org/10.1108/TG-03-2014-0010

Torres, Lourdes (2002). *La auditoría operativa: un instrumento para la mejora de la gestión pública*. Madrid: Asociación Española de Contabilidad y Administración de Empresas (AECA). ISBN: 84 89959 53 6

Torres, Lourdes; **Royo-Montañés, Sonia**; **García-Rayado, Jaime** (2020). "Social media adoption by audit institutions. A comparative analysis of Europe and the United States". *Government information quarterly*, January, v. 37, n. 1, 101433.
https://doi.org/10.1016/j.giq.2019.101433

Triantafillou, Peter (2020). "Playing a zero-sum game? The pursuit of independence and relevance in performance auditing". *Public administration*, v. 98, n. 1, pp. 109-123.
https://doi.org/10.1111/padm.12377

Van-Acker, Wouter; **Bouckaert, Geert** (2019). "The impact of supreme audit institutions and ombudsmen in Belgium and the Netherlands". *Financial accountability and management*, v. 35, n. 1, pp. 55-71.
https://doi.org/10.1111/faam.12182

Yamamoto, Kiyoshi; **Kim, Min Jeong** (2019). "Stakeholders' approach on government auditing in the supreme audit institutions of Japan and Korea". *Financial accountability and management*, v. 35, n. 3, pp. 217-232.
https://doi.org/10.1111/faam.12187

Zheng, Lei; **Zheng, Tuo** (2014). "Innovation through social media in the public sector: Information and interactions". *Government information quarterly*, v. 31, n. 1, pp. S106-S117.
https://doi.org/10.1016/j.giq.2014.01.011

Anexo 1. Lista de entidades analizadas

País	SAI/RAI	Estilo de administración	Nombre	Web
-	SAI	-	*European Court of Auditors*	*http://www.eca.europa.eu*
Alemania	SAI	Germánico	*Bundes Rechnungshof*	*http://www.bundesrechnungshof.de*
Alemania	RAI	Germánico	*Rechnungshof Baden Württemberg*	*http://www.rechnungshof.baden-wuerttemberg.de*
Alemania	RAI	Germánico	*Landesrechnungshof Brandenburg*	*http://www.lrh-brandenburg.de*
Alemania	RAI	Germánico	*Hessischer Rechnungshof*	*https://rechnungshof.hessen.de*
Alemania	RAI	Germánico	*Landesrechnungshof Mecklenburg Vorpommern*	*http://www.lrh-mv.de*
Alemania	RAI	Germánico	*Rechnungshof Rheinland Pfalz*	*http://www.rechnungshof-rlp.de*
Alemania	RAI	Germánico	*Sächsischer Rechnungshof*	*http://www.rechnungshof.sachsen.de*
Alemania	RAI	Germánico	*Landesrechnungshof Sachsen Anhalt*	*https://lrh.sachsen-anhalt.de*
Alemania	RAI	Germánico	*Landesrechnungshof Schleswig Holstein*	*http://www.landesrechnungshof-sh.de*
Alemania	RAI	Germánico	*Thüringer Rechnungshof*	*http://thueringer-rechnungshof.de*
Alemania	RAI	Germánico	*Bayerischer Oberster Rechnungshof*	*http://www.orh.bayern.de*
Alemania	RAI	Germánico	*Rechnungshof von Berlin*	*http://www.berlin.de/rechnungshof*
Alemania	RAI	Germánico	*Rechnungshof der Freien Hansestadt Bremen*	*http://www.rechnungshof.bremen.de*
Alemania	RAI	Germánico	*Rechnungshof der Freien und Hansestadt Hamburg*	*http://www.hamburg.de/rechnungshof*
Alemania	RAI	Germánico	*Niedersächsischer Landesrechnungshof*	*http://www.lrh.niedersachsen.de*
Alemania	RAI	Germánico	*Landesrechnungshof Nordrhein Westfalen*	*http://www.lrh.nrw.de*
Alemania	RAI	Germánico	*Rechnungshof des Saarlandes*	*http://www.rechnungshof.saarland.de*
Austria	SAI	Germánico	*Rechnungshoft Österreich*	*http://www.rechnungshof.gv.at*

País	SAI/RAI	Estilo de administración	Nombre	Web
Austria	RAI	Germánico	*Kärntner Landesrechnungshof*	*http://www.lrh-ktn.at*
Austria	RAI	Germánico	*Oberösterreichischer Landesrechnungshof*	*http://www.lrh-ooe.at*
Austria	RAI	Germánico	*Salzburger Landesrechnungshof*	*http://www.salzburg.gv.at/pol/lt-rechnungshof*
Austria	RAI	Germánico	*Steiermärkischer Landesrechnungshof*	*http://www.landesrechnungshof.steiermark.at*
Austria	RAI	Germánico	*Landesrechnungshof Tirol*	*http://www.tirol.gv.at/landtag/landesrechnungshof*
Austria	RAI	Germánico	*Burgenländischer LandesRechnungshof*	*http://www.blrh.at*
Austria	RAI	Germánico	*Niederösterreichischer Landesrechnungshof*	*http://www.lrh-noe.at*
Austria	RAI	Germánico	*LandesRechnungshof Vorarlberg*	*http://www.lrh-v.at*
Austria	RAI	Germánico	*Stadtrechnungshof Wien*	*http://www.stadtrechnungshof.wien.at*
Bélgica	SAI	Napoleónico	*Rekenhof Cour des Comptes Rechnungshof*	*http://www.courdescomptes.be*
Bulgaria	SAI	Países del Este	*Сметна палата на Република България*	*http://www.bulnao.government.bg*
Chipre	SAI	Países del Este	*Audit Office of the Republic of Cyprus*	*http://www.audit.gov.cy*
Croacia	SAI	Países del Este	*State Audit Office*	*http://www.revizija.hr*
Dinamarca	SAI	Nórdico	*Rigsrevisionen*	*http://uk.rigsrevisionen.dk*
Eslovaquia	SAI	Países del Este	*Najvyšší Kontrolný Úrad*	*http://www.nku.gov.sk*
Eslovenia	SAI	Países del Este	*Računsko Sodišče Republike Slovenije*	*http://www.rs-rs.si*
España	SAI	Napoleónico	*Tribunal de Cuentas de España*	*http://www.tcu.es*
España	RAI	Napoleónico	*Cámara de Cuentas de Aragón*	*http://www.camaracuentasaragon.es*
España	RAI	Napoleónico	*Cámara de Cuentas de Andalucía*	*http://www.ccuentas.es*
España	RAI	Napoleónico	*Sindicatura de Cuentas del Principado de Asturias*	*http://www.sindicastur.es*
España	RAI	Napoleónico	*Sindicatura de Comptes de les Illes Balears*	*http://www.sindicaturaib.org*
España	RAI	Napoleónico	*Audiencia de Cuentas de Canarias*	*http://www.acuentascanarias.org*
España	RAI	Napoleónico	*Consejo de Cuentas de Castilla y León*	*http://www.consejodecuentas.es*
España	RAI	Napoleónico	*Sindicatura de Comptes de Catalunya*	*http://www.sindicatura.org*
España	RAI	Napoleónico	*Consello de Contas de Galicia*	*http://www.consellodecontas.es*
España	RAI	Napoleónico	*Cámara de Cuentas de la Comunidad de Madrid*	*http://www.camaradecuentasmadrid.org*
España	RAI	Napoleónico	*Cámara de Comptos de Navarra*	*http://camaradecomptos.navarra.es*
España	RAI	Napoleónico	*Sindicatura de Comptes de la Comunitat Valenciana*	*http://www.sindicom.gva.es*
España	RAI	Napoleónico	*Tribunal Vasco de Cuentas Públicas*	*http://web.tvcp.orges*
Estonia	SAI	Países del Este	*Riigikontroll*	*http://www.riigikontroll.ee*
Finlandia	SAI	Nórdico	*Valtiontalouden Tarkastusvirasto*	*http://www.vtv.fi*
Francia	SAI	Napoleónico	*Cour des Comptes*	*http://www.ccomptes.fr*
Grecia	SAI	Napoleónico	*Ελεγκτικό Συνέδριο*	*http://www.elsyn.gr/el*
Hungría	SAI	Países del Este	*Állami Számvevöszék*	*https://asz.hu/*
Irlanda	SAI	Anglosajón	*Office of the Comtroller and Auditor General*	*http://www.audgen.gov.ie*
Italia	SAI	Napoleónico	*Corte dei Conti*	*http://www.corteconti.it*
Letonia	SAI	Países del Este	*Valsts Kontrole*	*http://www.lrvk.gov.lv*
Lituania	SAI	Países del Este	*Valstybës kontrolë*	*http://www.vkontrole.lt*
Luxemburgo	SAI	Napoleónico	Cour des Comptes	
Malta	SAI	Napoleónico	*Ufficcju Nazzjonali tal Verifika*	*http://nao.gov.mt*
Países Bajos	SAI	Nórdico	*Algemene Rekenkamer*	*http://www.rekenkamer.nl*
Países Bajos	RAI	Nórdico	*Noordelijke Rekenkamer*	*http://www.noordelijkerekenkamer.nl*
Países Bajos	RAI	Nórdico	*Rekenkamer OostNederland*	*http://rekenkameroost.nl*
Países Bajos	RAI	Nórdico	*Randstedelijke Rekenkamer*	*http://www.randstedelijke-rekenkamer.nl*
Países Bajos	RAI	Nórdico	*Rekenkamer Zeeland*	*http://www.rekenkamerzeeland.nl*
Países Bajos	RAI	Nórdico	*Zuidelijke Rekenkamer*	*http://www.zuidelijkerekenkamer.nl*
Países Bajos	RAI	Nórdico	*Rekenkamer Amsterdam*	*http://www.rekenkamer.amsterdam.nl*
Países Bajos	RAI	Nórdico	*Rekenkamer Rotterdam*	*https://rekenkamer.rotterdam.nl*
Polonia	SAI	Países del Este	*Najwyższa Izba Kontroli*	*http://www.nik.gov.pl*

País	SAI/RAI	Estilo de administración	Nombre	Web
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Bydgoszczy*	*http://www.bydgoszcz.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Katowicach*	*http://www.katowice.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Krakowie*	*http://www.krakow.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Łodzi*	*http://www.lodz.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Poznaniu*	*http://www.poznan.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Szczecinie*	*http://www.szczecin.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Warszawie*	*http://bip.warszawa.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa we Wrocławiu*	*http://bip.wroclaw.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Zielonej Górze*	*http://www.zielonagora.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalnej Izby Obrachunkowej w Białymstoku*	*http://bialystok.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna izba Obrachunkowa w Gdansku*	*http://www.bip.gdansk.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna izby Obrachunkowej w Kielchach*	*http://bip.kielce.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Lublinie*	*http://www.lublin.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalna Izba Obrachunkowa w Olsztynie*	*http://www.olsztyn.rio.gov.pl*
Polonia	RAI	Países del Este	*Regionalnej Izby Obrachunkowej w Opolu*	*http://rio.opole.pl*
Polonia	RAI	Países del Este	*Regionalna izba Obrachunkowa w Rzeszowie*	*http://www.rzeszow.rio.gov.pl*
Portugal	SAI	Napoleónico	*Tribunal de Contas*	*http://www.tcontas.pt*
Reino Unido	SAI	Anglosajón	*National Audit Office*	*http://www.nao.org.uk*
Reino Unido	RAI	Anglosajón	*Audit Scotland*	*http://www.audit-scotland.gov.uk*
Reino Unido	RAI	Anglosajón	*Wales Audit Office*	*http://www.audit.wales*
Reino Unido	RAI	Anglosajón	*Northern Ireland Audit Office*	*https://www.niauditoffice.gov.uk*
República Checa	SAI	Países del Este	*Nejvyšší Kontrolní úřad*	*http://www.nku.cz*
Rumanía	SAI	Países del Est	*Curtea de Conturi a României*	*http://www.curteadeconturi.ro*
Suecia	SAI	Nórdico	*Riksrevisionen*	*http://www.riksrevisionen.se*

Anexo 2. Tipos de publicaciones

Provisión de información	
Informes de auditoría	Informes de auditoría publicados por las SAIs/RAIs
Eventos y otras actividades de la institución	Eventos, conferencias, comunicados de prensa, apariciones en sesiones parlamentarias y otras actividades (por ejemplo, cambios de dirección, teléfono o email de contacto)
Información de interés público	Campañas de otras instituciones y recomendaciones de temas no relacionados con las actividades de la institución (por ejemplo, salud pública, elecciones)
Búsqueda de input	
Información de los ciudadanos	Solicitudes de participación en encuestas, campañas contra el fraude o sobre cualquier otro tema relacionado con la actividad de la institución
Recaudación de fondos	Peticiones de donaciones para diferentes causas no necesariamente relacionadas con la actividad de la institución (por ejemplo, la pobreza infantil)
Diálogo online/interacción presencial	
Dialogo online	Respuesta de las SAI/RAI a los comentarios de los usuarios en las redes sociales
Dialogo presencial	Comunicación de eventos presenciales para discutir la actividad de la institución, conocer su misión y funciones o colaborar con ella
Ofertas de trabajo y exámenes	Comunicación de ofertas de trabajo y anuncio de concursos/oposiciones realizados por la institución
Uso simbólico	
Presentación favorable/Imagen	Hitos alcanzados o premios recibidos, imágenes o vídeos promocionales, información interna con el claro objetivo de mejorar la imagen externa de la institución de auditoría
Otros actos simbólicos	Celebración de días señalados, expresión de condolencias o gratitud (por ejemplo, celebración del día del trabajo, de las fuerzas armadas u otras festividades)

Fuente: Clasificación adaptada de la propuesta por **DePaula**, **Dincelli** y **Harrison** (2018).

Anexo 3. Análisis bivariante

Correlaciones de Spearman		Índice de adopción
Ln (población)		0,301*
Penetración de internet		-0,018
Participación cívica o política a través de internet		-0,138
Interacción con las instituciones públicas a través de internet		0,036
Penetración de las redes sociales		0,292*
Mediana de edad de la población		-0,171
Porcentaje de mujeres		0,035
PIB per cápita (precios corrientes)		-0,137
Porcentaje de población con nivel educativo superior a secundaria		0,199
Estilo de administración pública	**Índice de adopción (media)**	**H Kruskal-Wallis**
Anglosajón	31,7%	
Nórdico	15,2%	
Países de la Europa del Este	11,3%	27,148*
Napoleónico	7,9%	
Germánico	0,9%	
Tipo de institución	**Índice de adopción (media)**	**U Mann-Whitney**
SAI	19,6%	1.354,000*
RAI	4,4%	

Nota: * p-valor < 0,01

Comunicación científica en el espacio digital. Acciones de difusión de proyectos de investigación del programa *H2020*

Scientific communication in the digital space: actions for the dissemination of research projects under the *H2020* program

Manuel Gertrudix; Mario Rajas; Juan Romero-Luis; Alejandro Carbonell-Alcocer

How to cite this article:

Gertrudix, Manuel; **Rajas, Mario**; **Romero-Luis, Juan**; **Carbonell-Alcocer, Alejandro** (2021). "Comunicación científica en el espacio digital. Acciones de difusión de proyectos de investigación del programa *H2020*". *Profesional de la información*, v. 30, n. 1, e300104.

https://doi.org/10.3145/epi.2021.ene.04

Artículo recibido el 18-05-2020
Aceptación definitiva: 11-08-2020

Manuel Gertrudix ✉
https://orcid.org/0000-0002-5869-3116

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28934 Fuenlabrada (Madrid), España
manuel.gertrudix@urjc.es

Mario Rajas
https://orcid.org/0000-0002-3807-8327

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28934 Fuenlabrada (Madrid), España
mario.rajas@urjc.es

Juan Romero-Luis
https://orcid.org/0000-0002-5786-3638

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28934 Fuenlabrada (Madrid), España
juan.romero@urjc.es

Alejandro Carbonell-Alcocer
https://orcid.org/0000-0003-0081-4728

Universidad Rey Juan Carlos
Facultad de Ciencias de la Comunicación
Camino del Molino, 5
28934 Fuenlabrada (Madrid), España
alejandro.carbonell@urjc.es

Resumen

La comunicación científica es un requerimiento exigido en las convocatorias competitivas de proyectos financiadas por la Unión Europea a través del programa *Horizonte 2020*. Los proyectos aprobados deben contar con un *PEDR* (*Plan de explotación y diseminación de resultados*) que establezca las estrategias de comunicación, y que concrete estas en acciones y productos que contribuyan a alcanzar a los diferentes grupos de interés atendiendo al modelo de la cuádruple hélice. En este artículo se analizan las acciones de divulgación y comunicación de los resultados de los proyectos de investigación del programa *H2020*, liderados por entidades, organismos o empresas de España, realizadas a través de la web y los medios sociales. La hipótesis de trabajo establece que las acciones de comunicación realizadas a través de la web y los medios sociales es escasa, estandarizada y responde a recursos y formatos de bajo coste y con producciones no profesionales. A partir de la base de datos *Cordis* de proyectos financiados por el programa *H2020*, se ha seleccionado una muestra de 50 proyectos elegidos en función del criterio de financiación. Se han elegido aquellos con un nivel más alto considerando que ello permitiría, en principio, una mayor dotación para las acciones de comunicación. La metodología aplica un análisis descriptivo y explicativo de las webs y los medios sociales utilizados por los proyectos mediante el *Método de análisis de comunicación científica en medios digitales* (*Macomed*), realizando una comparativa evolutiva entre 2017 y 2020. Las variables de análisis contemplan: a) la presencia en web y medios sociales, b) el nivel de utilización de estos canales de comunicación y difusión considerando métricas como el nivel de actividad, la diversidad de canales, la cadencia de publicación, el nivel de interacción con sus audiencias, el *engagement* de sus comunicaciones, y el nivel de producción que desarrollan. Los resultados muestran una comunicación en los medios digitales propios (web y redes sociales) que evoluciona con el desarrollo de los proyectos, pero que resulta desigual, con un alcance limitado fundamentalmente a *Twitter* y *Facebook*, y muy orientada a alcanzar a los pares de investigación y los agentes evaluadores, pero que carece de una orientación clara que cubra la demanda de abrir la comunicación a la sociedad tal como establecen los principios de la investigación e innovación responsable (RRI).

Palabras clave

Comunicación de la ciencia; Comunicación pública de la ciencia y la tecnología; RRI; Proyectos de investigación; Difusión de la ciencia; *H2020*; *Horizonte 2020*; Plan de comunicación; Redes sociales; Medios sociales; Medios propios; Medios digitales; *Twitter*; *Facebook*; *LinkedIn*; *YouTube*.

Abstract

The European Union's *H2020* program requires that all proposals submitted to calls include a scientific communication plan. Approved projects must have a *plan for exploitation and dissemination of results* (PEDR) that sets out the communication strategies. These must be translated into actions and products that contribute to reaching the different interest groups, following the four-helix model. This research analyzes the actions for disseminating and communicating the results of the research projects of the *H2020* program led by entities, bodies, or companies in Spain and carried out through the web and social media. The hypothesis establishes that the communication actions carried out through the web and social media are scarce, standardized, and correspond to low-cost resources and formats, with nonprofessional production. From the database of projects funded by the *H2020* program available on *Cordis*, a sample of 50 projects was selected based on funding criteria, choosing those with a higher level, as it is considered that this would, in principle, allow a greater allocation to communication actions. The methodology relies on descriptive and explanatory analyses of the websites and social media of the projects using the *Method of analysis of scientific communication in digital media* (*Macomed*), enabling an evolutionary comparison between 2017 and 2020. The variables of analysis are: (a) presence on the web and social media and (b) the level of use of these communication and dissemination channels considering metrics such as the level of activity, the diversity of channels, the rate of publication, the level of interaction with their audiences, the engagement with their communications, or the level of production achieved. The results reveal communication in digital media (web and social networks) that evolves with the development of the projects but that is unequal, with its scope limited mainly to *Twitter* and *Facebook*, and being highly oriented to reach research peers and evaluation agents, but lacking a clear orientation that addresses the demand for open communication to society as established by the principles of responsible research and innovation (RRI).

Keywords

Science communication; Public communication of science and technology; RRI; Research projects; Science dissemination; *H2020*; Horizon 2020; Communication plan; Social networks; Social media; Own media; Digital media; *Twitter*; *Facebook*; *LinkedIn*; *YouTube*.

Financiación

Investigación realizada con el apoyo del *Ministerio de Ciencia, Innovación y Universidades* de España dentro del proyecto "Comciencia: Comunicación eficaz, eficiente y responsable para proyectos de investigación competitivos" (CSO2017-82875-C2-1-R).

1. Introducción

El programa *H2020* ha impulsado un cambio en el modelo de diseminación y divulgación científica de los proyectos financiados por la Unión Europea en programas competitivos al establecer, como un requerimiento exigido, que todas las propuestas incorporen un *Plan de explotación y diseminación de resultados* (*PEDR*) (*Comisión Europea*, 2016). Este plan debe establecer las estrategias de comunicación, concretándolas en acciones y productos que contribuyan a alcanzar a los diferentes grupos de interés. Ello para atender al modelo de la cuádruple hélice de la innovación –administración pública, sociedad civil, investigación y empresas– (**Samelin**, 2013), instaurar modelos de innovación más inclusivos, democráticos y eficientes (**Braun**; **Starkbaum**, 2019) contribuir a una gobernanza científica basada en investigación e innovación responsable (*Comisión Europea*, 2014a) y generar un impacto social medible (*Ruvid*, 2015).

Este nuevo enfoque solo puede llevarse a cabo mediante un proceso planificado de la comunicación científica, integrado desde el origen en el diseño de los proyectos, y que establece unos objetivos definidos, con la finalidad de alcanzar a unos públicos mediante un conjunto de estrategias de diseminación que hacen un uso óptimo de los canales y recursos de comunicación disponibles (**Dudo**; **Besley**, 2016; **Gertrudix**; **Rajas**; **Gertrudis-Casado**; **Gálvez-de-la-Cuesta**, 2020). Pero ello no presupone que, ante el mismo nivel de planificación, los resultados de comunicación, medidos en términos de impacto social, sean homogéneos. Como señala **Flecha** (2020), es fundamental diferenciar entre publicación científica, difusión, transferencia e impacto social, para orientar adecuadamente los esfuerzos de comunicación establecidos en el *PEDR*. La comunicación debe ser capaz de generar impacto social, mejorando las condiciones de vida de los ciudadanos y acercando los resultados a los decisores políticos para que sus políticas y toma de decisiones incorporen ese nuevo saber. La pregunta que surge es si las acciones que llevan a cabo los proyectos de investigación del programa *H2020* están encaminadas adecuadamente a ello.

La comunicación debe ser capaz de generar impacto social, mejorando las condiciones de vida de los ciudadanos y acercando los resultados a los decisores políticos

El objetivo principal de la investigación es analizar las acciones de divulgación y comunicación de los proyectos de investigación del programa *H2020*, liderados por entidades, organismos o empresas de España, realizadas a través de medios propios. Para ello, se ha llevado a cabo un análisis de las webs de los proyectos, así como de la actividad en los principales medios sociales, realizando una comparativa evolutiva entre 2017 y 2020. La hipótesis principal de trabajo establece que las acciones de comunicación realizadas a través de la web y los medios sociales es escasa, estandarizada y responde a recursos y formatos de bajo coste y con producciones no profesionales.

2. Estado del arte

La necesidad de involucrar a todos los públicos en el conocimiento científico, de refuerzo y ampliación del diálogo entre ciencia y sociedad es una tendencia internacional que se ha ido consolidando a través de un lento proceso llevado a cabo en las últimas décadas que se ha unido, más recientemente, al concepto de ciencia abierta (**Grand**, 2020). El objetivo es establecer un compromiso público –*public engagement*– que permita implementar y estimular formas de comunicación que faciliten la interacción y la escucha, y ello genere un beneficio mutuo (*National Coordinating Centre for Public Engagement*, 2016). Un proceso de democratización que es tanto una necesidad como un derecho de la ciudadanía y que requiere, para **Gallea** (2017), comunicar la ciencia de manera muldireccional mediante un sistema de retroalimentación circular.

La obligatoriedad de incorporar planes de diseminación y divulgación en las propuestas de proyectos ha sido un elemento clave para impulsar este cambio de modelo. Como señala **Berman** (2017), los datos de impacto presentados en el marco de excelencia en la investigación de 2014 en el Reino Unido mostraron que la exigencia de incorporar en los proyectos un apartado de "vías de impacto" (*pathways to impact*) ha supuesto un notable incremento de las acciones de participación, lo que ha reforzado que esto se convierta en una acción estratégica tanto para los consejos de investigación como para las propias universidades. En esta línea, *H2020* exige a los proyectos de investigación el diseño de planes de comunicación que contemplen de forma global la estrategia y las actividades de difusión, comunicación y explotación de resultados (*Comisión Europea*, 2014b). Dichos planes deben contemplar medidas estratégicas y especializadas para comunicar tanto el proyecto como sus resultados, identificar claramente la diversidad de audiencias a las que puede dirigirse, incorporando mecanismos bidireccionales cuando sea adecuado, y estableciendo alcances de los resultados de comunicación que sean medibles (*European IPR Helpdesk*, 2015; **Scherer** *et al.*, 2018).

La evolución del entorno digital ha modificado la forma de abordar la comunicación de la ciencia, cobrando cada vez más importancia, en el modelo *POE –paid*, *owned*, *earned*– (**Sciarrino** *et al*., 2019) los medios propios –webs y redes sociales– y los medios ganados[1] frente a los medios pagados, que suelen estar fuera del alcance natural de los presupuestos de los proyectos de investigación (**López-Pérez**; **Olvera-Lobo**, 2016).

La importancia de los canales sociales se ha visto impulsada por la facilidad de interacción entre los científicos, pero también de estos con los públicos a los que tratan de alcanzar con sus resultados (**Collins**; **Shiffman**; **Rock**, 2016) con la finalidad de aumentar los conocimientos científicos, promover la confianza, explorar opciones de carrera, establecer redes internacionales e influir en las políticas científicas (**Yammine** *et al.*, 2018). A esta expansión ha contribuido el nuevo ecosistema móvil de comunicación (**Valero-Pastor**; **García-Ortega**, 2018) que facilita el acceso continuado a la información, pero también se enfrenta a problemas como la sobreinformación, la infoxicación y el desorden informativo que actúan como fuerzas de dispersión de la atención (**Gertrudix-Barrio**; **Borges-Rey**; **García-García**, 2017).

> En la comunicación de la ciencia en el entorno digital cada vez cobran más importancia los medios propios –web y redes sociales– y los medios ganados frente a los medios pagados

En los últimos años se han seguido dos líneas orientadas a optimizar la comunicación a través de los medios propios en el entorno digital, así como para tener una mayor capacidad de impactar en los medios ganados. Por una parte, la formación de los propios investigadores para mejorar sus habilidades como comunicadores científicos mediante manuales (**Jamieson**; **Kahan**; **Scheufele**, 2017), guías específicas (**Cann**, 2011) y cursos de formación (**Baram-Tsabari**; **Lewenstein**, 2017), y, por otra, mediante una creciente profesionalización de los procesos de comunicación a través de especialistas en la materia (**Guenther**, 2019).

Consecuentemente, los proyectos de investigación competitivos financiados en *H2020* han convertido la utilización de medios propios tales como el sito web del proyecto o la comunicación en las principales redes sociales, como un activo fundamental de sus procesos de comunicación (**Marín-González** *et al.*, 2017). El estudio de las webs de los proyectos ha sido abordada desde perspectivas diversas como el análisis del discurso (**Lorés**, 2020) o la incentivación de la participación a través de soluciones de colaboración (**Fan**, 2018), y la utilización de los medios sociales se ha interesado en el ecosistema de la denominada Ciencia 2.0 (**Cabezas-Clavijo**; **Torre-Salinas**; **Delgado-López**, 2009), el análisis de datos de los perfiles sociales para conocer las temáticas que se debaten, así como los enlaces que se comparten (**Uhl**; **Kolleck**; **Schiebel**, 2017) o el uso que hacen los centros especializados de investigación y las universidades públicas (**López-Pérez**; **Olvera-Lobo**, 2016; 2019).

> Los proyectos de investigación financiados en *H2020* han convertido los medios propios como el sito web del proyecto o las principales redes sociales como un activo fundamental de sus procesos de comunicación

3. Metodología

El modelo utilizado es el *Análisis de Comunicación Científica en Medios Digitales* (*Macomed*) (**Gertrudix**; **Romero-Luis**; **Carbonell-Alcocer**; **Rajas**, 2019) aplicado a los medios propios: web y canales sociales. La recogida de información se ha realizado mediante una ficha de análisis administrada a través de un formulario web.

Del procedimiento de análisis, que se describe de forma detallada en el apartado 3 del modelo *Macomed*, se han seleccionado para este estudio las preguntas de tres categorías, que se aplican como variables agrupadas:

- Presencia en webs y medios sociales,
- Nivel de utilización de los canales de comunicación, y
- Difusión e impacto en los principales canales de medios sociales.

Además, se incluyen las variables descriptivas de los proyectos para conocer su propósito, alcance, objetivo y públicos. En la descripción del modelo se incluye la relación completa de las variables descriptivas, las variables agrupadas, sus indicadores, sus valores y su respectiva operacionalización.

El análisis se ha llevado a cabo en un proceso longitudinal con dos tomas de registro: el primero en abril de 2017 y el segundo en marzo de 2020 con el fin de establecer una comparativa de la evolución de las variables. Las variables analizadas se han mantenido en ambos cortes temporales a excepción de las de la sección de *noticias* y suscripción o publicación de *newsletter*, que se incorporaron en 2020.

Para este estudio, el universo lo conforman los proyectos de investigación del programa *H2020*, liderados por entidades, organismos o empresas de España, que a 30 de abril de 2017, eran 1.340 según datos de *Cordis*. La muestra de este análisis está formada por los 50 proyectos con mayor financiación (*Comisión Europea*, 2017).

4. Resultados

4.1. Presencia en web y medios sociales

Los datos recogidos en relación a la variable agrupada *Presencia en canales web y medios sociales* reflejan un aumento significativo de 2017 a 2020 de los perfiles de *YouTube*/*Vimeo* (+20%), de las webs (+10%), de *Twitter* (+6%), y de los canales *LinkedIn* (+6%) como se puede observar en la figura 1. Otros canales también aumentaron, aunque menos: *Facebook* (+2%) y *Flickr* (+2%). En 2020 solo las presencias en *Slideshare* y *Scribd* se mantuvieron igual con respecto de 2017. Hay un grupo de medios sociales (*Diigo*, *Delicious*, *Mendeley*, *Zotero*, *CiteULike*, live streaming [*Ustream*...]) que no cuentan con presencia desde 2017.

En los proyectos analizados que cuentan con una web se ha identificado la presencia de blog, de sección de noticias y de apartados de suscripción o publicación de *newsletters*. En la recogida de datos de 2020, los autores identificaron la presencia de estas dos últimas y se procedió a su recopilación, pero no se cuenta con datos de la sección de noticias y suscripción o publicación de *newsletter* en 2017. Los datos de 2020 reflejan la presencia de la sección de noticias en 36 webs analizadas (75%) y de *newsletter* en 14 (29%) (figura 2). Estas últimas se representan de diferente forma: 10 casos en los que la *newsletter* está integrada en la web, 1 en el que solo se puede acceder mediante suscripción por email y 4 que cuentan con ambas opciones (integrada en la web y por medio de suscripción por email).

La presencia de blog es minoritaria. Solo se identifica en 5 de las webs, en 2017 y no se observan nuevos casos en 2020, a pesar de que la presencia de webs aumentó un 10% de la muestra total.

4.2. Nivel de utilización de los canales de comunicación y difusión

a. Variación del nivel de información de la web, blog y noticias, y frecuencias de actualización en blog, noticias y newsletter

En términos generales, los datos recogidos en 2017 y 2020 reflejan muy poca variación entre el nivel de información tanto de la web como del blog. La diferencia que encontramos en el promedio del nivel de información de la web es poco sustancial ya que entre ambos periodos es de 2,74 (2017) y 3,1 (2020), correspondiente al valor "3. Bastante infor-

Figura 1. Evolución en porcentaje de la posesión de los medios sociales en 2017 y 2020 en toda la muestra.

mación" (figura 3). La desviación típica experimenta, también, una ligera variación, con valores que ascienden del 0,73 de 2017 al 0,75 de 2020.

A pesar de que no existe variación en el nivel de posesión de blogs entre 2017 y 2020, se produce un ligero cambio en el nivel de información disponible en estos entre ambos periodos. Tanto en 2017 como en 2020 un 80 % de los blogs tienen poca información, si bien el 20% restante pasa de encontrarse "no activo/en desarrollo" en 2017 a "tiene bastante información" en 2020.

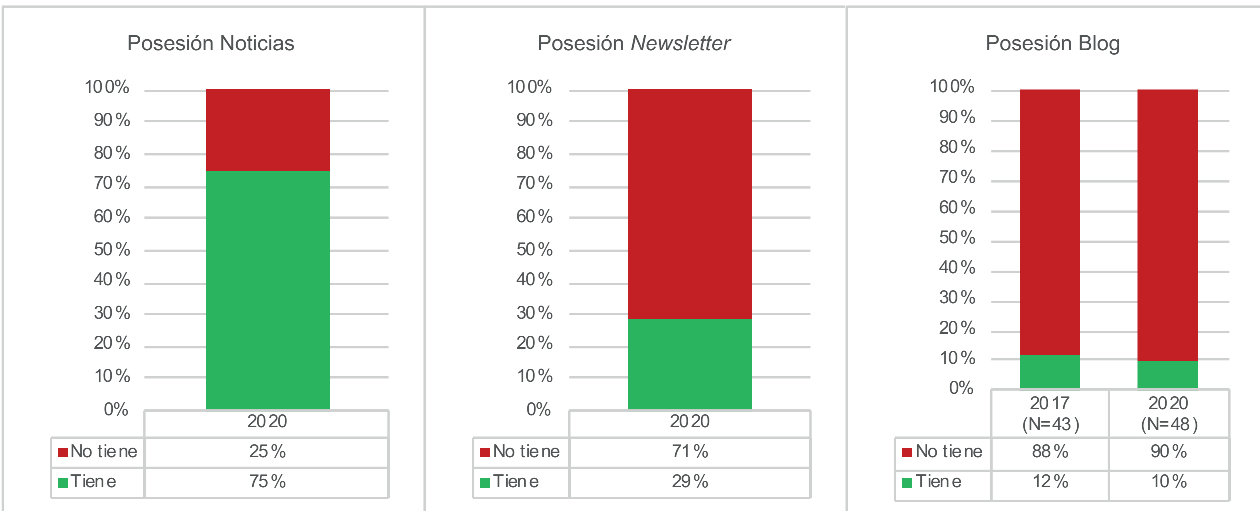


Figura 2. Porcentajes de posesión de blog, sección de noticias y *newsletter* con respecto al total proyectos que cuentan con web.

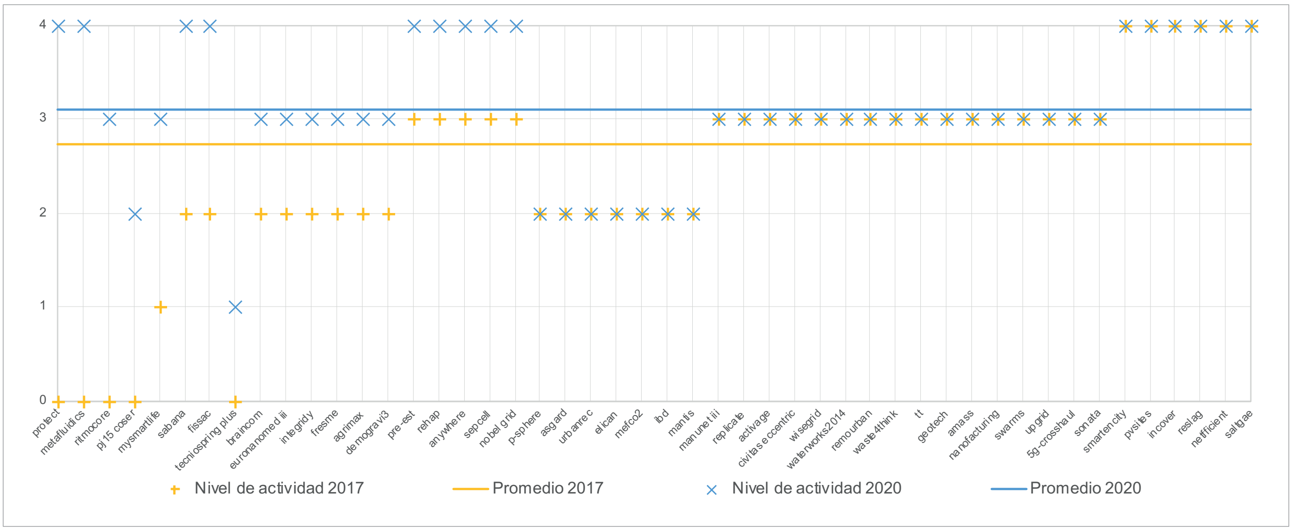


Figura 3. Variación del nivel de información de la web ordenada de mayor a menor variación.

Dado que no se cuentan con datos recogidos en 2017 del nivel de información de las noticias, se procede a una comparación entre los datos de esta variable entre la sección de noticias y blog (figura 4). Los datos revelan que el nivel de información en las noticias es mucho mayor que en el caso del blog. Hay que tener en cuenta, en cualquier caso, que el tamaño de la muestra (N) en esta comparación está desequilibrado. Asimismo, se observa que, con respecto a la sección noticias, un 72% de las webs incluyen “bastante” o “mucha información”, mientras que en el blog solo un 20% tienen “bastante información”.

Con respecto a la frecuencia de actualización, si comparamos los datos recogidos de *newsletter*, noticias y blog en 2020 (figura 4), se observa que la frecuencia predominante es “esporádica” en las tres, con valores entre el 57% y el 40%, lo que indica que la mayoría de las acciones de comunicación se realizan entre intervalos de más de un mes. Son pocos los casos donde la publicación es semanal o quincenal.

b. Variación del nivel de información de canales de medios sociales

En términos generales se observa un aumento del nivel de información de los principales canales de medios sociales (*Twitter*, *LinkedIn*, *Facebook* y *YouTube*) aunque de forma desigual (figura 5).

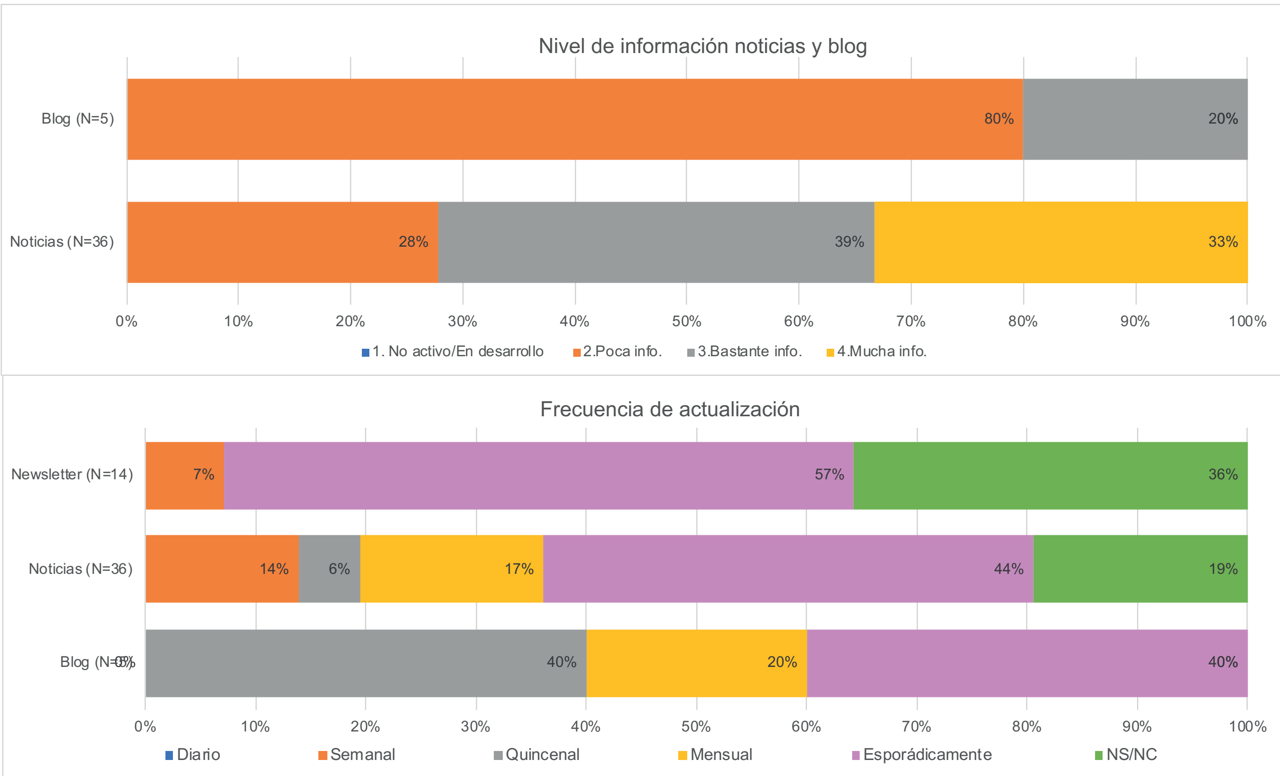


Figura 4. Nivel de información de noticias y blogs y frecuencia de actualización en 2020.

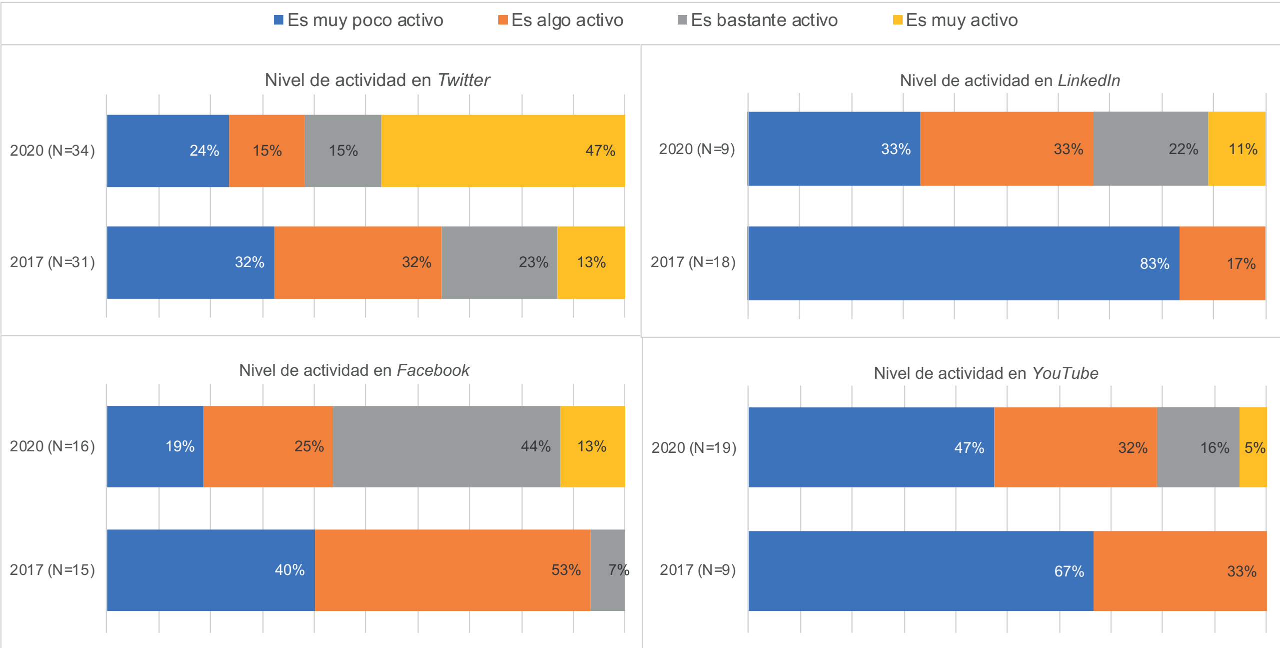


Figura 5. Variación del nivel de utilización de los principales canales de medios sociales.

Si bien en todos los casos el porcentaje del valor "es muy activo", este ha aumentado de 2017 a 2020, siendo en *Twitter* donde encontramos la mayor diferencia, con una subida del 34%. Se trata de un aumento considerable teniendo en cuenta que el valor N aumenta de forma poco significativa (de 31 en 2017 a 34 proyectos con cuentas activas de *Twitter* en 2020).

Con respecto a *Facebook* se observa un aumento importante, aunque más moderado que el anterior, de un 13% para el valor "es muy activo". En 2017 no se identificó ninguna página con mucha actividad y, por tanto, este aumento es reseñable. También lo es el aumento del valor "es bastante activo" que crece un 37% entre ambos periodos.

En el caso de los datos que se han recogido con respecto a *LinkedIn* merece la pena entrar con detalle. Lo más significativo es la reducción de la muestra entre 2017 (N=18) y 2020 (N=9). A pesar de que la muestra total de canales de *LinkedIn* es mayor, hay un gran número de cuentas de grupos privados que no se incluyen en el análisis de esta variable. Teniendo en cuenta este factor, hay una reducción del 50% para la valoración "es muy poco activo", lo que significa que en 2020 aumentan con respecto al 2017, ya sean las cuentas con "es algo activo" (+17%), con "es bastante activo" (+22%) y con "es muy activo" (11%).

En el caso de *YouTube* el aumento es más moderado. Se debe tener en cuenta que el número de canales ha aumentado de 9 en 2017 a 19 en 2020. Consecuentemente, en 2020 aparecen los valores "es bastante activo" (+16%) y "es muy activo" (+5%), que en 2017 no alcanzaba ningún canal de *YouTube*.

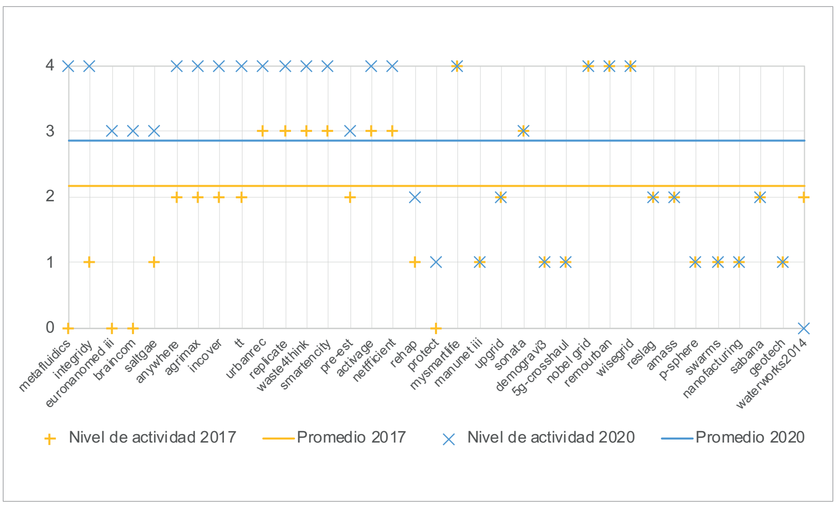


Figura 6. Variación del nivel de actividad de *Twitter* ordenada de mayor a menor variación.

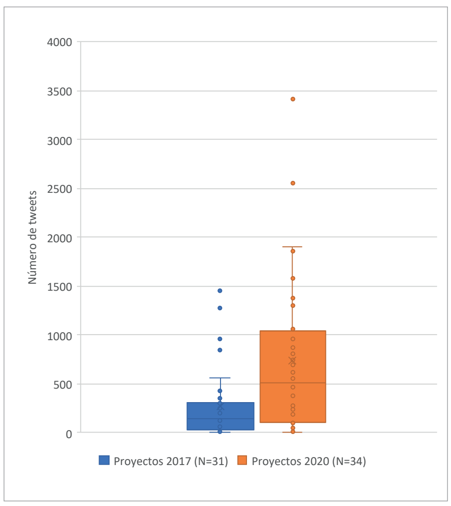


Figura 7. Número de tweets de las cuentas *Twitter*.

c. Variación del nivel de actividad de las cuentas de *Twitter*

Se observa una variación sustancial con respecto a la actividad de *Twitter*. Su promedio aumenta de 2,16 en 2017 a 2,85 en 2020, pasando la media de "2. Algo activo" a "3. Bastante activas" (figura 6). El 45% de los proyectos con cuentas de *Twitter* mantienen una utilización similar en el periodo, aunque se produce un aumento de proyectos que en 2020 disponen de una cuenta en esta red social. Conjuntamente, la desviación típica experimenta una variación de 0,22, pasando de 1,04 en el 2017 a 1,26 en el 2020.

El número de tweets totales emitidos refleja un valor interesante que ayuda a ilustrar de una forma más precisa el nivel de utilización de las cuentas de *Twitter* de los proyectos de investigación. Entre los dos años de recogida de información, se produce un incremento notable en la cantidad global de tweets, pasando la media de 273,06 en 2017 a 738,62 en 2020.

No obstante, es aún más interesante el análisis sobre el cambio de distribución del número de tweets entre ambos años. Los valores centrales de las dos distribuciones son 147 tweets en 2017 y 515,5 tweets en 2020. Encontramos una variación del rango intercuartílico de los valores de 2017, que asciende a 278,5, en 2017 mientras que en el año 2020 es de 940,25. Se observa, por tanto, que en 2017 existe una gran concentración de proyectos cuyo número total de tweets se encuentra entre los valores 35 (Q1) y 313,5 (Q3) (15 proyectos), y que en 2020 hay concentración entre los valores 107,5 (Q1) y 1047,75 (Q3) (16 proyectos).

d. Variación del nivel de utilización de las cuentas de *Facebook*

El promedio en las cuentas de *Facebook* de los proyectos aumenta moderadamente pasando de 1,67 en 2017 a 2,5 en 2020. Es decir, este valor pasa de estar por debajo de "2. Es algo activo" a colocarse justo entre los valores "2. Es algo activo" y "3. Es bastante activo" (figura 8). Además, la desviación típica varía en 0,35, pasando de 0,62 en el 2017 a 0,97 en el 2020.

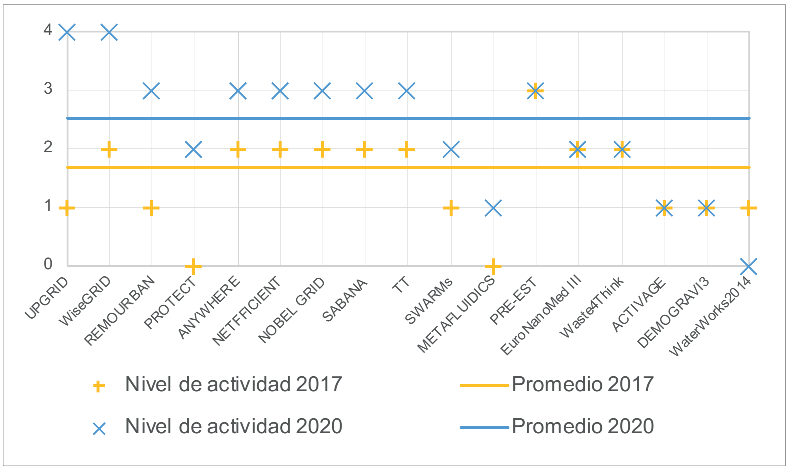


Figura 8. Variación del nivel de actividad de las cuentas de *Facebook*

e. Variación del nivel de utilización de las cuentas de *LinkedIn*

Se observa un aumento de actividad de los canales *LinkedIn* en los perfiles y grupos públicos (18 en 2017 y 9 en el 2020). No obstante, merece la pena destacar el aumento elevado del porcentaje de canales privados, que pasa del 18% al 64%.

Si bien podemos afirmar que el porcentaje de nivel actividad de las cuentas de los proyectos aumenta, no se cuenta con datos de la actividad de los grupos privados y, por tanto, no se puede afirmar que, teniendo en cuenta el total de la muestra de los canales *LinkedIn*, exista un aumento de la actividad entre la 2017 y 2020.

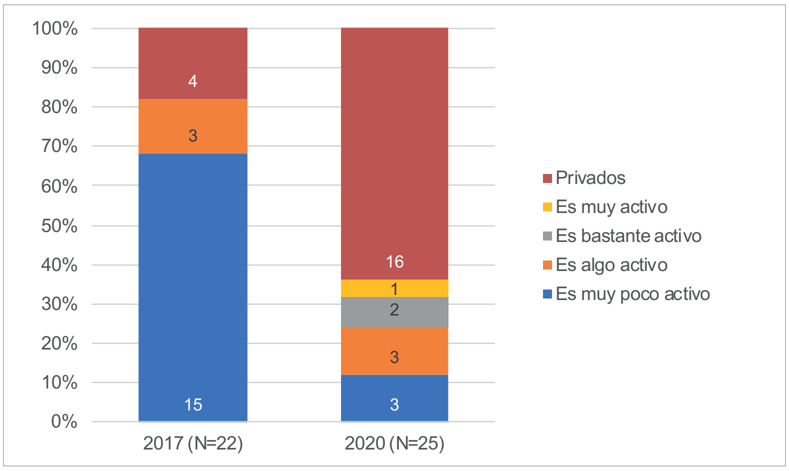


Figura 9. Variación en el nivel de actividad de las cuentas de *LinkedIn* y canales privados.

f. Variación del nivel de utilización de las cuentas de *YouTube*

La actividad en *YouTube* sigue la misma línea al alza que el resto de las canales de medios sociales. A pesar de que se trate del canal con menor actividad en ambos periodos (figura 5). El promedio de su nivel de actividad aumenta de 1,33 en 2017 a 1,79, en 2020. Redondeando las cifras, equivale a pasar de "1. Es muy poco activo" a "2. Es algo activo". Además, se produce una variación en la desviación típica de 0,42 en el nivel de actividad, pasando de 0,5 en 2017 a 0,92 en 2020.

El número de vídeos de los canales de las cuentas de *YouTube* que corresponden a los proyectos de investigación arrojan un valor que ayuda a comprender el nivel de utilización de dichos perfiles. Se observa un aumento evidente del número de vídeos publicados desde 2017 a 2020, que se concreta en una variación de la media de esta variable que asciende de 4,67 vídeos en 2017 a 23 vídeos en 2020.

Si se profundiza en el análisis, para observar la variación con respecto a la distribución, se comprueba que los valores centrales pasan de 2 en 2017 a 8 en 2020. Encontramos una variación considerable del rango intercuartílico, que asciende de 6 a 20 entre ambos años. Estas cifras marcan la evolución en uso de esta plataforma, que en 2017 era muy limitado, con la mayoría de los proyectos con un número total de vídeos de entre 2 (Q1) a 8 (Q3), y que en 2020 crece a valores entre los 8 (Q1) y 20 (Q3) vídeos totales.

4.3. Impacto global obtenido en canales de medios sociales

En términos generales, el impacto ha aumentado en 2020 con respecto al 2017. La diferencia más notable se observa en la variación media del número de seguidores de *Facebook* (411,02) seguida de *Twitter* (410,61), *LinkedIn* (107,56) y *YouTube* (25,43). Se trata de un dato relevante, ya que *Facebook* no se encuentra enfocada hacia el ámbito profesional. Además, para la valoración del impacto global, también se han analizado las variables que corresponden con el número total de likes de *Facebook* (figura 16) y el número de visualizaciones del vídeo con más reproducciones en los canales de *YouTube* (figura 17).

Con respecto al número de seguidores en *Facebook*, se observa un cambio notable en la distribución. Su recorrido intercuartílico pasa de 133,5 (2017) a 249,25 (2020). Destacan tres valores atípicos en 2020, entre los que se encuentra el proyecto que da el valor máximo de 3.431 seguidores (figura 12). Esas cifras son muy similares cuando se comparan con el número de likes (figura 16). La variación media del número de likes (390,15) es menor que la variación media del número de seguidores (411,02). En general, se encuentran pequeñas variaciones con respecto al número de seguidores y de likes en las mismas cuentas de *Facebook*.

Por otro lado, en la figura 13 se observa también una variación significativa con respecto a la distribución de los proyectos considerando el número de seguidores de las cuentas de *Twitter*, que varía considerablemente entre los dos periodos. La

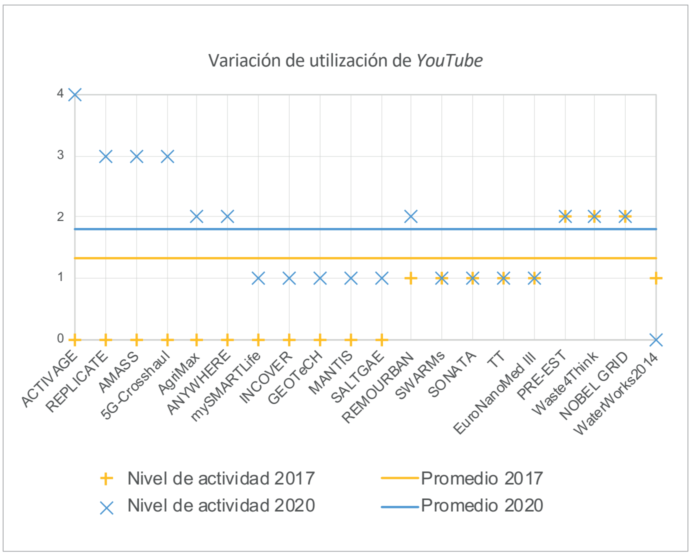


Figura 10. Variación del nivel de actividad de las cuentas de *YouTube*.

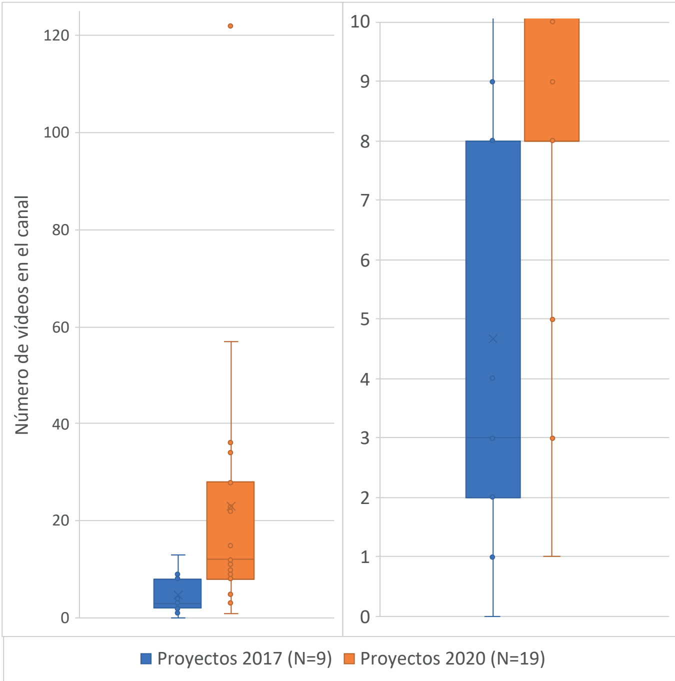


Figura 11. Número de vídeos en las cuentas *YouTube*.

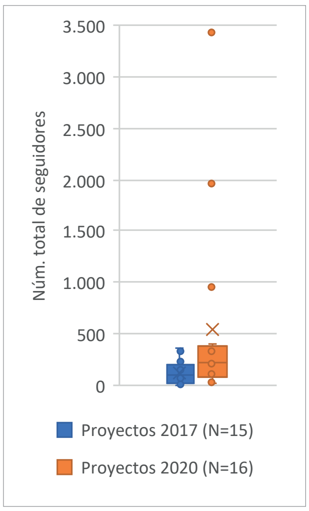


Figura 12. Impacto, seguidores *Facebook*.

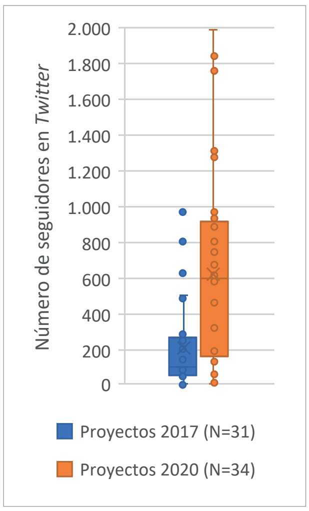


Figura 13. Impacto, seguidores *Twitter*.

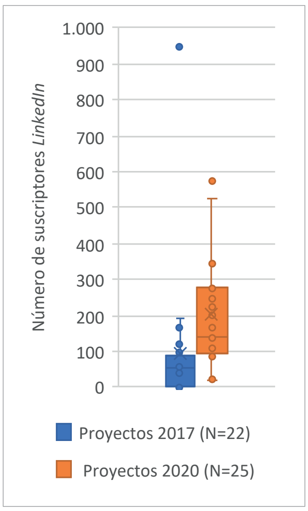


Figura 14. Impacto, seguidores *LinkedIn*.

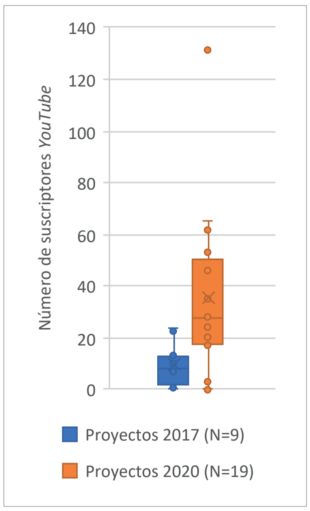


Figura 15. Impacto, seguidores *YouTube*.

mayoría de los proyectos se encuentran agrupados entre 51 (Q1) y 271 (Q3) seguidores en 2017, y entre 160 (Q1) y 922 (Q3) en 2020. Cabe destacar la existencia de valores atípicos tanto por encima del umbral Q3 (8 proyectos en 2017 y 9 en 2020) como por debajo del valor Q1 (8 proyectos en 2017 y 9 en 2020). Asimismo, la mediana varía notablemente, puesto que en 2017 (102) está muy cercana al valor Q1 y en 2020 (596) está más cercana al Q2.

Las redes sociales de *LinkedIn* y *YouTube* son las que cuentan con menor impacto en relación con el número de seguidores. La red social para profesionales *LinkedIn* cuenta con un recorrido intercuartílico de 87,75 en 2017 y de 181 en 2020 (figura 14). El valor atípico que destaca en 2020, con 949, corresponde al caso *WaterWorks2014*. En 2017 la cuenta de *LinkedIn* estaba asociada exclusivamente al proyecto de investigación que forma parte de la muestra, pero en la recogida de 2020 se ha descartado ya que la cuenta ha integrado, además, a otros proyectos relacionados con la misma temática pero que no forman parte de este estudio.

En cuanto a *YouTube* destaca por ser la red social que cuenta con menos número de seguidores (figura 15). Sus valores cuentan con un recorrido intercuartílico de 11 en 2017 y de 33 en 2020. Un aspecto interesante, que arroja información sobre el impacto del canal de *YouTube*, es el número de reproducciones del vídeo con más reproducciones (figura 17). El vídeo con más reproducciones, en ambos periodos, es un valor atípico que se aleja del percentil 75 (1.381 en 2017 y 6.550 en 2020). El promedio de las reproducciones es muy variado, así como la distribución de este valor. La media en 2017 es de 373,22 y en 2020 de 1.472,68, posiblemente debido a la diferencia de la N en los distintos periodos. Así, el rango intercuartílico es de 504 en 2017 y de 2.164 en 2020, lo que ilustra sobre el aumento considerable de las visualizaciones del vídeo con más reproducciones.

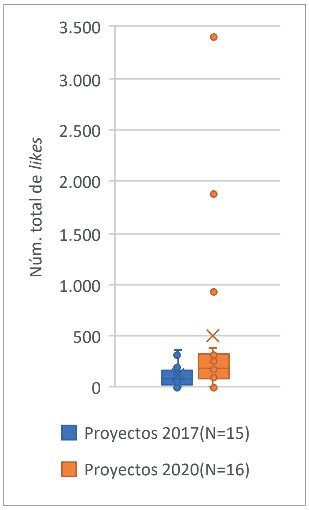


Figura 16. Total de likes en *Facebook*.

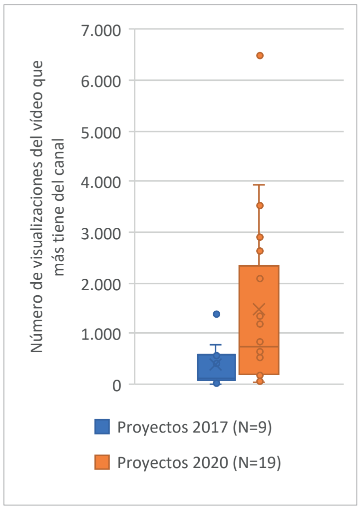


Figura 17. Número de visualizaciones del vídeo con más reproducciones del canal

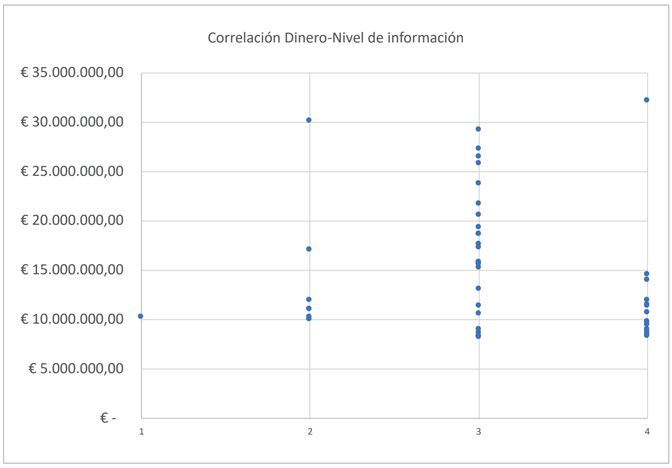


Figura 18. Correlación entre el presupuesto concedido en el año 2017 y nivel de información de los proyectos de información en 2020 (Valores: 1: Tiene, pero no está activa o está en desarrollo. 2: Tiene, pero hay poca información. 3: Tiene, y hay bastante información 4: Tiene, y hay mucha información).

4.4. Correlación entre financiación e impacto de los medios digitales propios

El diagrama de dispersión muestra que no hay una relación directa entre la financiación global del proyecto y un mayor nivel de información en sus webs. El resultado del coeficiente de correlación es r=-0,114, lo que señala una correlación inversa y débil. Asimismo, se puede observar dos agrupaciones de proyectos con menor financiación que poseen un mayor nivel de información en los sitios web.

5. Discusión y conclusiones

El uso que se hace de los medios digitales propios es poco homogéneo y con un impacto limitado. El nivel de actualización de los blogs, newsletters y noticias es bajo, con ciclos de publicación mensuales y, en general, una baja actividad. Ello puede indicar que, a pesar del interés que estas aplicaciones despiertan, son posiblemente las que requieren un flujo de producción más constante y con mayor nivel de compromiso por parte de los miembros del proyecto para mantener una actividad continuada durante todo el ciclo de vida de este.

El nivel de información de los canales de medios sociales aumenta a medida que maduran los proyectos, aunque los resultados son heterogéneos entre estos. Es *Twitter* el medio que mayor actividad presenta y porcentualmente crece más, seguido de *Facebook*. *LinkedIn* tiene un seguimiento desigual y *YouTube* crece en volumen de actividad cuando el proyecto sigue una estrategia de comunicación basada en vídeo. Estos resultados son concordantes con los de otros estudios previos (**Marín-González** *et al.*, 2017) que señalan cómo, a pesar del valor concedido a realizar una intensa comunicación a través de los medios propios (web del proyecto, uso de perfiles o hashtags en *Twitter*,

> El uso que se hace de los medios digitales propios es poco homogéneo y con un impacto limitado. La actualización es baja, con ciclos de publicación mensuales

Facebook, *LinkedIn*…), tanto los centros de investigación y las universidades públicas (**López-Pérez**; **Olvera-Lobo**, 2016) como los proyectos financiados por el *European Research Council* (**López-Pérez**; **Olvera-Lobo**, 2019) hacen un escaso uso real de las redes sociales para la comunicación científica.

> Se rechaza la hipótesis de que los proyectos con mayor presupuesto inicial concedido realizan acciones de diseminación en sus sitios web con mayor nivel de información

La mayor variación del nivel de actividad se produce, de manera consecuente, en *Twitter*, donde no solo aumenta el volumen sino que esta se distribuye de forma más homogénea entre todos los proyectos, lo que indica que para la mayor parte se convierte en un canal útil para la difusión de novedades y que, por tanto, se usa de forma habitual. Este aumento es más moderado en el caso de *Facebook*. En el caso de *LinkedIn* se produce un crecimiento importante de canales privados, lo que puede denotar el interés por mantener, en este canal, una comunicación de naturaleza especializada con pares o grupos de interés específicos relacionados con la temática del proyecto y con una divulgación de resultados menos abierta. En cuanto a *YouTube*, se produce un crecimiento en la intensidad de actividad vinculada al nivel de publicaciones de vídeos realizados, lo que es coherente con el nivel de maduración y desarrollo del proyecto, así como con la disponibilidad de recursos audiovisuales vinculados a este: promocionales, resultados, reuniones, acciones de difusión, etc. Ello indica que el uso de medios sociales para la comunicación de los proyectos se circunscribe a aquellos con mayor penetración social, como *Twitter*, *Facebook*, *LinkedIn* y *YouTube*, con un uso definido para la distribución de novedades y la interacción, a veces muy contenida, con los seguidores de los perfiles o hashtags. Es residual el uso de otros servicios que, hace ya más de una década, se establecían como elementos del ecosistema de la ciencia 2.0 (**Cabezas-Clavijo**; **Torres-Salinas**; **Delgado-López**, 2009) tales como los blogs, los gestores de referencias y los sitios de etiquetado social.

En cuanto al impacto global obtenido en los canales, resulta interesante cómo *Facebook*, no siendo la red más activa, es la que logra un mayor aumento en el número de seguidores, lo que supondría que es la que resulta más eficiente en términos de esfuerzo/resultado. No obstante, *Twitter* sigue una evolución similar considerando tanto el número de seguidores como el de likes. *LinkedIn* y *YouTube* ofrecen las variaciones más modestas. En el caso de *LinkedIn* puede ser debido a que su carácter profesional hace que los aumentos sean más limitados, aunque tal vez de mayor calidad en términos de impacto a largo plazo. En el de *YouTube*, podría ser un indicador, sin embargo, de que la producción audiovisual realizada no despierta interés suficiente, pues los valores de reproducción son muy heterogéneos.

El análisis de correlación entre financiación e impacto de los medios digitales propios indica que no existe relación entre las variables correlacionadas, por lo que se rechaza la hipótesis de que los proyectos con mayor presupuesto inicial concedido realizan acciones de diseminación en sus sitios web con mayor nivel de información. Aunque no se pueden extrapolar las conclusiones al resto de la población, debido al tamaño de la muestra, sí se observa la tendencia de las variables para indicar que, por encima de un suelo de financiación mínimo para disponer de recursos necesarios para desarrollar profesionalmente las acciones de comunicación, un incremento de dicha financiación no comporta, necesariamente, un mayor impacto de estas.

> Los resultados muestran una comunicación en los medios digitales propios (web y redes sociales) que evoluciona con el desarrollo de los proyectos, pero que resulta desigual, con un alcance limitado

Los resultados muestran una comunicación en los medios digitales propios (web y redes sociales) que evoluciona con el desarrollo de los proyectos, pero que resulta desigual, con un alcance limitado fundamentalmente a *Twitter* y *Facebook*, y muy orientada a alcanzar a los pares de investigación y los agentes evaluadores, pero que carece de una orientación clara que cubra la demanda de abrir la comunicación a la sociedad tal como establecen los principios de la investigación e innovación responsable (RRI).

Nota

1. Dentro del modelo de marketing *POE* (*Paid*, *owned*, *earned*), medios ganados son los espacios que se logran en medios de terceros de manera gratuita. Algunas acciones en comunicación científica estarían asociadas a las publicaciones, eventos, etc., que se obtienen en medios derivadas del envío de notas de prensa, acciones de RRPP, pero también mediante colaboraciones que se realizan con terceros publicando contenidos de forma periódica (reportajes, columnas, posts en blogs, contenidos audiovisuales en canales de *YouTube*, etc.).

6. Referencias

Baram-Tsabari, Ayelet; **Lewenstein, Bruce** (2017). “Science communication training: what are we trying to teach?”. *International journal of science education*, Part B, v. 7, n. 3, pp. 285-300.
https://doi.org/10.1080/21548455.2017.1303756

Berman, David (2017). “Vote por engagement”. *THE Times Higher Education*.
https://www.timeshighereducation.com/opinion/vote-for-engagement

Braun, Robert; **Starkbaum, Johannes** (2019). “Open forms of innovation collaborations should become more inclusive and democratic to make them efficient”. *RiConfigure*.
https://irihs.ihs.ac.at/id/eprint/5356

Cabezas-Clavijo, Álvaro; **Torres-Salinas, Daniel**; **Delgado-López-Cózar, Emilio** (2009). “Ciencia 2.0: catálogo de herramientas e implicaciones para la actividad investigadora”. *El profesional de la información*, v. 18, n. 1, pp. 72-79.
https://doi.org/10.3145/epi.2009.ene.10

Cann, Alan (2011). *Social media. A guide for researchers. Department of Biology at the University of Leicester*.
http://www.rin.ac.uk/system/files/attachments/social_media_guide_ for_screen_0.pdf

Carbonell-Alcocer, Alejandro; **Romero-Luis, Juan**; **Gertrudix, Manuel**; **Rajas, Mario** (2020). “Tablas de frecuencias. Acciones de difusión de proyectos de investigación del programa *H2020* a través de medios propios” (versión 1) [data set]. *Zenodo.*
http://doi.org/10.5281/zenodo.3785709

Collins, Kimberley; **Shiffman, David**; **Rock, Jenny** (2016). “How are scientists using social media in the workplace?”. *PloS one*, v. 11, n. 10, e0162680.
https://doi.org/10.1371/journal.pone.0162680

Comisión Europea (2014a). “Public engagement in responsible research and innovation”. *Portal H2020*.
https://ec.europa.eu/programmes/horizon2020/en/h2020-section/public-engagement-responsible-research-and-innovation

Comisión Europea (2014b). “Dissemination & exploitation of results”. *Fundig & tender opportunities*.
https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/dissemination-of-results_en.htm

Comisión Europea (2016). “Communicating EU research and innovation guidance for project participants”. *Funding & Tenders Portal.*
https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/communication_en.htm

Comisión Europea (2017). *Cordis. Resultados de investigaciones de la UE.*
https://cordis.europa.eu

Dudo, Anthony; **Besley, John C.** (2016). “Scientists’ prioritization of communication objectives for public engagement”. *PloS one*, v. 11, n. 2, e0148867.
https://doi.org/10.1371/journal.pone.0148867

European IPR Helpdesk (2015). “Fact sheet. The plan for the exploitation and dissemination of results in Horizon 2020”. *IRP Helpdesk*.
https://bit.ly/irphelpdesk-h2020

Fan, Chaonan (2018). “How to develop collaboration between bioeconomy clusters through a digital platform”. *Theseus.fi.*
https://www.theseus.fi/handle/10024/185287

Flecha, Ramón (2020). *¿Cómo conseguir o aumentar el impacto de los proyectos y cómo liderar un proyecto de referencia? How to improve the social impact of the projects?*. Ars Civilis.
http://www.arscivilis.org/wp-content/uploads/2014/05/12_Ramon-Flecha_1de3.pdf

Gallea, José-Ignacio (2017). “¿Por qué debemos exigir al Estado la comunicación de la ciencia?”. *La voz*, 4 junio.
https://www.lavoz.com.ar/opinion/por-que-debemos-exigir-al-estado-la-comunicacion-de-la-ciencia

Gertrudix-Barrio, Manuel; **Borges-Rey, Eddy**; **García-García, Francisco** (2017). “Redes sociales y jóvenes en la era algorítmica”. *Telos*, v. 107, pp. 62-70.
https://telos.fundaciontelefonica.com/archivo/numero107/redes-sociales-y-jovenes-en-la-era-algoritmica

Gertrudix, Manuel; **Rajas, Mario**; **Gertrudis-Casado, María-del-Carmen**; **Gálvez-de-la-Cuesta, María-del-Carmen** (2020). “Gestión de la comunicación científica de los proyectos de investigación en H2020. Funciones, modelos y estrategias”. *Profesional de la información*, v. 29, n. 4, e290424.
https://doi.org/10.3145/epi.2020.jul.24

Gertrudix, Manuel; **Romero-Luis, Juan**; **Carbonell-Alcocer, Alejandro**; **Rajas, Mario** (2019). “Modelo de análisis de comunicación científica en medios digitales - Macomed”. *Zenodo*.
http://doi.org/10.5281/zenodo.3783778

Grand, Ann (2020). *Open science and public engagement: Exploring the potential of the open paradigm to support public engagement with science*. (thesis). *University of the West of England*.
https://uwe-repository.worktribe.com/output/941959

Guenther, Lars (2019). “Science journalism”. *Oxford research encyclopedia of communication*.
https://doi.org/10.1093/acrefore/9780190228613.013.901

Jamieson, Kathleen-Hall; **Kahan, Dan M.**; **Scheufele, Dietram A.** (eds.) (2017). *The Oxford handbook of the science of science communication*. Oxford University Press. ISBN: 978 0 190497620
https://doi.org/10.1093/oxfordhb/9780190497620.001.0001

López-Pérez, Lourdes; **Olvera-Lobo, María-Dolores** (2016). "Comunicación pública de la ciencia a través de la web 2.0. El caso de los centros de investigación y universidades públicas de España". *El profesional de la información*, v. 25, n. 3.
https://doi.org/10.3145/epi.2016.may.14

López-Pérez, Lourdes; **Olvera-Lobo, María-Dolores** (2019). "Participación digital del público en la ciencia de excelencia española: análisis de los proyectos financiados por el European Research Council". *El profesional de la información*, v. 28, n. 1, e280106.
https://doi.org//10.3145/epi.2019.ene.06

Lorés, Rosa (2020). "Science on the web: The exploration of European research websites of energy-related projects as digital genres for the promotion of values". *Discourse, context & media*, v. 35, 100389.
https://doi.org/10.1016/j.dcm.2020.100389

Marín-González, Esther; **Malmusi, Davide**; **Camprubí, Lluís**; **Borrell, Carme** (2017). "The role of dissemination as a fundamental part of a research project: Lessons learned from Sophie". *International journal of health services*, v. 47, n. 2, pp. 258-276.
https://doi.org/10.1177/0020731416676227

National Coordinating Centre for Public Engagement (2016). "What is public engagement?". *University of Bristol*.
https://www.publicengagement.ac.uk/about-engagement/what-public-engagement

Ruvid (2015). *Impacto en los proyectos H2020. Recomendaciones para elaborar una propuesta*.
http://ruvid.org/ri-world/wp-content/uploads/2015/07/Guia_ImpactoH2020.pdf

Salmelin, Bror (2013). "The Horizon 2020 framework and open innovation ecosystems". *Journal of innovation management*, v. 1, n. 2, pp. 4-9.
https://doi.org/10.24840/2183-0606_001.002_0002

Scherer, Jörg; **Weber, Sthephanie**; **Azofra, Maria**; **Ruete, Alexandra**; **Sweeney, Eugene**; **Weiler, Nina**; **Sagias, Ioannis**; **Haardt, Jakob**; **Cravettp, Rossella**; **Spichtinger, Daniel**; **Ala-Mutka, Kirsti** (2018). "Making the most of your H2020 project". *The European IPR Helpdesk project*.
https://www.iprhelpdesk.eu/sites/default/files/EU-IPR-Brochure-Boosting-Impact-C-D-E.pdf

Sciarrino, JoAnn; **Friedman, Jim**; **Kirk, Todd**; **Kitchings, Kim S.**; **Prudente, John** (2019). "Customer journey modelling: An integrated approach to quantify the importance, contribution and efficiency of paid, owned and earned media". Parvatiyar, Atul; Sisodia, Rajendra (eds.). *Handbook of advances in marketing in an era of disruptions: Essays in honour of Jagdish N. Sheth*. SAGE. ISBN: 978 9352809585

Uhl, André; **Kolleck, Nina**; **Schiebel, Edgard** (2017). "Twitter data analysis as contribution to strategic foresight - The case of the EU research project "Foresight and modelling for european health policy and regulations" (Fresher)". *European journal of futures research*, v. 5, n. 1, art. 1.
https://doi.org/10.1007/s40309-016-0102-4

Valero-Pastor, José-María; **García-Ortega, Alba** (2018). "La importancia de comunicar la ciencia en el nuevo ecosistema móvil". *Divulgación científica e innovación mediática. Comunicar la ciencia en el ecosistema móvil*, p. 9. Egregius Ediciones. ISBN: 978 84 17270704

Yammine, Samantha Z.; **Liu, Christine**; **Jarreau, Paige B.**; **Coe, Imogen R.** (2018). "Social media for social change in science". *Science*, v. 360, n. 6385, pp. 162-163.
https://doi.org/10.1126/science.aat7303

Evolución de la medición digital de la audiencia en el mercado español: estado de la cuestión y retos de futuro

Evolution of digital audience measurement in the Spanish market: state of the art and future challenges

Natalia Quintas-Froufe; Ana González-Neira

Cómo citar este artículo:

Quintas-Froufe, Natalia; **González-Neira, Ana** (2021). "Evolución de la medición digital de la audiencia en el mercado español: estado de la cuestión y retos de futuro". *Profesional de la información*, v. 30, n. 1, e300102.

https://doi.org/10.3145/epi.2021.ene.02

Artículo recibido el 30-06-2020
Aceptación definitiva: 14-08-2020

Natalia Quintas-Froufe
https://orcid.org/0000-0001-7597-6516

Universidade da Coruña
Facultad de Comunicación
Campus de Elviña
15007 A Coruña, España
n.quintas.froufe@udc.es

Ana González-Neira
https://orcid.org/0000-0002-6369-0323

Universidade da Coruña
Facultad de Comunicación
Campus de Elviña
15007 A Coruña, España
ana.gneira@udc.es

Resumen

La medición de la audiencia online siempre ha generado dificultades, entre otros factores, por tratar de encontrar una metodología adecuada a las particulares propiedades del medio. Internet estaba llamado a ser desde su nacimiento el medio mejor medido (Lamas, 2010), sin embargo, hoy en día todavía quedan múltiples interrogantes por resolver. El objetivo de esta investigación es estudiar la evolución del sistema de medición de la audiencia digital en el entorno español de modo que se aportarán los indicadores y parámetros, así como la tecnología utilizada, para medir la audiencia digital en el mercado español. A través de una metodología mixta se examina el sistema actual de medición de audiencias digitales en España contando con las declaraciones de algunos expertos del sector. La empresa medidora oficial, *Comscore* basa su trabajo en la medición censal, muestral y la procedente de datos de otros operadores digitales colaboradores. A través de la metodología híbrida presenta los datos de consumo digital en España. Las opiniones de los expertos indican que no se trata de un sistema perfecto y presenta algunas deficiencias y variados retos. Todavía estamos lejos de disponer de un sistema consolidado y consensuado, principalmente porque dado que es un objeto de estudio que se encuentra en transformación constante por los avances técnicos, también los sistemas de medición se tienen que ir adaptando a esas nuevas necesidades, así como a mejoras en la financiación. El modelo actual difícilmente refleja el consumo digital en España a pesar de haber introducido nuevas tecnologías de monitorización.

Palabras clave

Audiencias; Audiencia digital; Audimetría; Medios digitales; Internet; Panel; Convergencia; Publicidad; Vídeo digital; Digitalización; Dispositivos móviles; Medición digital.

Abstract

Online audience measurement has always been difficult for various reasons, including the search for a suitable methodology to study particular characteristics of this media. The internet has been called the most well-measured media (Lamas, 2010), but many questions remain unresolved today. The aim of this study is to study the digital audience measurement system in the Spanish environment in order to provide indicators and parameters, as well as the technology used to measure the digital audience in the Spanish market. The current system for measuring digital audiences in Spain is analyzed based on a mixed methodology including statements by experts. The official measuring company, *Comscore*, bases its work on the census, sampling, and data from other collaborating digital operators. The results of the hybrid methodology provide digital consumption data for Spain. The experts' opinions indicate that the system is not perfect and presents various deficiencies and challenges. A consolidated and consensual system remains far off, mainly because, since the object of study is in constant transformation due to technical advances, measurement systems must also be adapted to these new needs as well as to improvements in financing. Despite the introduction of new monitoring technologies, the current model barely reflects digital consumption in Spain.

Keywords

Audiences; Digital audience; Audimetry; Digital media; Internet; Panel; Convergence; Advertising; Digital video; Digitalization; Mobile devices; Digital measurement.

1. Introducción

Desde los años noventa internet ha ido penetrando en todos los escenarios de la vida humana, incluidos los medios de comunicación. La transformación de estos ha sido estudiada por múltiples teóricos a lo largo de estos años (**Cerezo**, 2018; **Castells** *et al.*, 2009; **Carlón**; **Scolari**, 2009) ya que ha pasado por diferentes fases en las que algunos incluso pronosticaron el fin de los medios tradicionales, como la prensa escrita, la radio o la televisión.

La digitalización ha roto las barreras del tiempo y lugar y por consiguiente ha ampliado las posibilidades de oferta de contenidos. La mejora en la calidad de las conexiones, así como la multiplicación de los dispositivos móviles y el acceso en movilidad cambiaron los patrones de navegación y dificultaron más si cabe llevar a cabo la medición de su consumo. La reciente crisis provocada por la pandemia de la Covid-19 ha puesto de manifiesto la altísima penetración de internet en todos los aspectos de la vida. Durante el mes de abril, en pleno confinamiento, los españoles mayores de 18 años navegaron más de tres horas diarias en internet, cifra que marca un récord histórico de consumo digital en España (*Barlovento*, 2020).

Con el fin de evaluar la difusión de esa comunicación online es imprescindible, tanto para los públicos como para los medios y los anunciantes, contar con un sistema de medición de audiencias digitales que facilite datos fiables y consensuados (**Callejo**, 2019; **Cavaller**, 2014). En este caso, el sector trabaja con la concepción de audiencia como mercancía (**McQuail**, 1994), si bien Callejo prefiere el término capital (**Callejo**, 2019), como moneda de cambio indispensable en el campo publicitario y que posee también una notable finalidad en la determinación de las estrategias de difusión y planificación de un producto (**Van-Es**, 2019). Según los datos de *Infoadex* (2020) por volumen de inversión publicitaria el digital superó por primera vez a la televisión en 2019. Creció un 8,8% con un volumen de inversión publicitaria de 2.296,2 millones de euros frente a los 2.002,8 millones de euros que atrajo la pequeña pantalla (*Infoadex*, 2020). Por lo tanto, se trata de un campo en el que se produce una enorme presión debida a los fuertes intereses económicos de los actores.

Tradicionalmente, el estudio de la audimetría no ha constituido uno de los temas principales para la academia, de ahí que la bibliografía sobre la medición digital no sea muy extensa (**Rodríguez-Vázquez**; **Direito-Rebollal**; **Silva-Rodríguez**, 2018; **Huertas**, 2018; **Mytton**; **Diem**; **Van-Dam**, 2016; **Moreno-Cazalla** (s.f.); **Portilla-Manjón**, 2009; **Bermejo**, 2008; 2007; 2003). En algunos casos se ha centrado sobre la monitorización del consumo a través de dispositivos móviles (**Medina**; **Portilla**, 2016), en otros en su influencia en la comercialización publicitaria (**Gutiérrez-Merelles**, 2019; **Papí-Gálvez**; **Perlado-Lamo-de-Espinosa**, 2018; **Aguado-Guadalupe**, 2017; **Maestro-Espínola**; **García-Santamaría**; **Pérez-Serrano**, 2016; **Maestro-Espínola**, 2015), en el estudio de la audiencia de los medios nativos (**García-Orosa**, 2018) o en su influencia en las rutinas de trabajo de los periodistas digitales (**MacGregor**, 2007).

La medición de las audiencias online surgió poco tiempo después del nacimiento de los primeros medios de comunicación digitales. Con el fin de atraer ingresos publicitarios era necesario contar con datos fiables que respaldaran el tráfico de cada uno de estos medios. Internet estaba llamado a ser desde su nacimiento el medio mejor medido (**Lamas**, 2010). Dada la naturaleza de su tráfico y la huella que deja, en un primer momento se pensó que la monitorización y medición de esta red sería muy fácil (**Bermejo**, 2007). Sin embargo, pronto se desvelaron los primeros obstáculos: la dificultad de estandarización de la medición (**Solanas**; **Carreras**, 2011), la falta de consenso (**Maestro-Espínola**, 2015) y la necesidad de nuevas métricas para las audiencias (**Hernández-Pérez**; **Rodríguez-Mateos**, 2016; **Papí-Gálvez**, 2014) han entorpecido la evolución de los sistemas de medición de audiencias digitales. La rápida evolución del medio dificulta contar con un sistema de medición estandarizado y completo que afronte nuevos retos como la supresión de las cookies y el respeto a la privacidad. La evolución en otros países es constante, como demuestra la reciente declaración de *Nielsen* (2020) sobre los cambios en la metodología aplicada de la medición online.

Ni los sistemas de medición pasivos (en los que la información procede exclusivamente del dispositivo que se conecta), ni los activos (en los que los propios usuarios declaran el uso que realizan de internet), ni los sistemas mixtos han conseguido datos completos y útiles para todos los actores del sector. Los métodos pasivos brindaban datos cuantitativos pero no cualitativos. No obstante, la metodología híbrida, basada en el censo y en el usuario, suele ser la más habitual en la mayoría de los países europeos (**Papí-Gálvez**, 2017). Los datos masivos (*big data*) aportan oportunidades interesantes para obtener datos de audiencias integradas (**Mutter**, 2011) pero como indican **Rodríguez-Vázquez**, **Direito-Rebollal** y **Silva-Rodríguez** (2018) las tradicionales técnicas de audimetría deben combinarse con técnicas de *big* y *thick data*

> "ya que 'confiar únicamente en los *big data* genera imágenes distorsionadas de los usuarios' y no aporta el valor de contexto necesario (**Mondragón-Valero**, 2017; **Rius**, 2017)".

Los *thick data* permitirían extraer mayor información de los fríos datos, a través de investigaciones cualitativas sobre experiencia de usuarios (**Huertas**, 2020). Los datos deben ser contextualizados (**Livingstone**, 2019), interpretados con el fin de obtener la mayor información y evitar caer en una superficialidad inútil. Lamentablemente las soluciones a las necesidades detectadas no siempre se acompañan con las imprescindibles inversiones para ponerlas en práctica.

En España hay varias fuentes de información sobre audiencias digitales:

- Por un lado la *OJD Interactiva*, propiedad de *Información y Control de Publicaciones S.A.* (*site centric*), estudia la difusión de los sitios web y recoge datos como navegadores únicos, páginas vistas y duración media, información que no termina de satisfacer a una parte del sector.
- Por otra parte, el *Estudio General de Medios* elaborado por la *AIMC* (*Asociación para la Investigación en Medios de Comunicación*) en sus tres oleadas anuales presenta datos sobre audiencias digitales (*user centric*), si bien de un modo muy general. Los resultados muestran qué sitios web (recogen algunos como *YouTube* y *Facebook*) son los más visitados según las entrevistas realizadas. También desde el año 1996 la *AIMC* lleva a cabo el estudio "Navegantes en la red", con el propósito de conocer el perfil del internauta así como sus hábitos en la utilización de internet.
- La búsqueda de datos más precisos que facilitasen un panorama real y constante del consumo digital motivó que en 2012, *IAB* (*Interactive Advertising Bureau*) y *AIMC* realizaran el primer concurso para homologar el medidor de audiencias digitales de referencia, siguiendo la línea del estudio único (**Huertas**, 2018). Tras más de ocho años, se hace necesario evaluar en qué momento se encuentra la medición digital en España y cuáles son los principales retos que afronta.

2. Objetivos

Con el fin de llevar a cabo este estudio que aborda las audiencias digitales en España se plantearon las siguientes preguntas de investigación:

P1: ¿Con qué indicadores cuenta la medición digital actual?

P2: ¿Cuáles son las necesidades de la industria que se recogen en las convocatorias de los concursos?

P3: ¿Cómo se está midiendo la realidad digital en España?

P4: ¿Cómo se elige al medidor oficial? ¿Quiénes son los agentes responsables de tomar la decisión?

P5: ¿Cómo se está midiendo la actividad publicitaria digital en el mercado español?

P6: ¿Qué tecnología se emplea? ¿es adecuada a la realidad del mercado?

Esta investigación tiene como finalidad principal estudiar la evolución del sistema de medición de la audiencia digital en el entorno español centrándose sobre todo en el actual (O1). De este modo se aportarán los indicadores y parámetros, así como la tecnología utilizada, para medir la audiencia digital en el mercado español. Se planteó realizar un análisis comparativo de los dos convenios marco de *Comscore* (2011 y 2017) pero no fue posible ya que parte del primer acuerdo es confidencial para las partes firmantes.

La selección del medio online se justifica por la alta penetración de internet en la sociedad española (79,9%) (*AIMC*, 2020), así como por su evolución creciente y continua en las últimas décadas que ha derivado en que la categoría digital ocupe por primera vez la primera posición por volumen de inversión dentro de los medios controlados (*Infoadex*, 2020), como se mencionaba con anterioridad.

Un objetivo secundario de esta investigación (O2) es exponer los retos de la medición digital, así como los principales desafíos a los que se enfrenta en el futuro próximo. La medición online es altamente compleja y cambiante, por ello también se apuntarán las principales dificultades para recopilar datos de las audiencias digitales en este nuevo entorno fragmentado, al que se accede a través de múltiples dispositivos de acceso.

3. Metodología

Los métodos seleccionados para esta investigación responden a la calificación de métodos mixtos (**Chen**, 2006). Este autor considera que es un modo de integrar de forma sistemática la metodología cuantitativa y cualitativa en un solo estudio para obtener una "fotografía" más completa de la realidad estudiada. La necesidad de emplear este método se debe a la naturaleza compleja del objeto de estudio y al interés por obtener una perspectiva más amplia y profunda del fenómeno (**Hernández-Sampieri**; **Fernández-Collado**; **Baptista-Lucio**, 2014).

El diseño de la investigación ha sido secuencial: en una primera fase se examinó la documentación procedente de fuentes primarias y secundarias para contextualizar el objeto de estudio. En una segunda fase, construida en función de los resultados obtenidos en la primera etapa, se realizaron entrevistas personales semi-estructuradas con preguntas abiertas a una selección de expertos y profesionales del sector con el fin de conocer de primera mano el estado de la medición digital en España y cuáles eran los principales retos que afronta. Las cuestiones principales de la entrevista giraron en torno a cinco bloques temáticos:

1) valoración global sobre la medición actual;

2) fortalezas y debilidades del sistema de medición actual;

3) posibilidad de creación de un *JIC* (*Joint Industry Committee*)[1];

4) evaluación comparativa de la medición digital en España respecto al mercado internacional;

5) principales retos futuros.

La muestra de entrevistados se seleccionó de modo que estuvieran representados todos los integrantes del mercado digital: medios, principales asociaciones del sector, anunciantes, etc. Además, se intentó que muchos de los seleccionados hubieran participado, de algún modo, en la convocatoria actual del concurso con el fin de que tuvieran un conocimiento de primera mano del sector y de la situación actual. La selección de expertos, entrevistados entre el 15 de marzo y el 5 de mayo de 2020, estuvo formada por las personas que se muestran en la tabla 1. Cabe destacar que la *AEA*, junto con otras asociaciones que forman parte de la *Comisión de Industria Publicitaria* (*CIP*), estaban poniendo en marcha el nuevo concurso de la Medición Digital con el consenso de los principales agentes, por lo que no consideraron oportuno responder al cuestionario, aunque sí indicaron cuál sería el sistema de medición más idóneo para el futuro próximo. Las entrevistas no pudieron realizarse personalmente como estaba previsto debido al estado de alarma provocado por la Covid-19.

Tabla 1. Profesionales entrevistados

Nombre del entrevistado	Empresa	Cargo
Pablo Pérez	*Google*[2]	Head of market insights Spain and Portugal
Javier López Cuenllas	*Mediaset España*	Director de marketing
Gonzalo Iruzubieta	*Comscore*	Sales director
Begoña Gómez	*AEA*	Directora técnica
Pepe Cerezo	*Evoca*[3]	Director
David Sánchez	*nPeople*[4]	CEO
José Luis Rodríguez		Consultor independiente de medios
Luis Fernando Ruiz Bedoya[5]	*Omnicom Media Group*	Insights & intelligence director

Las cuestiones que se le plantearon a este panel de expertos pretendían dar respuesta a las preguntas de investigación. Una vez realizadas todas las entrevistas, se transcribieron para una posterior sistematización de los datos.

4. Resultados

4.1. Cronología de los hechos

El 1 de julio de 2011 la *AIMC* y el *IAB* publicaron las condiciones de concurso para conseguir un sistema de medición digital de referencia en la compraventa publicitaria del mercado español. Esta propuesta recogía las condiciones técnicas necesarias para llevar a cabo esta medición en el entorno español desde 1 de enero de 2012 al 31 de diciembre de 2014, con posibilidad de extenderse dos años más. Ese mismo día se publicó el pliego con la petición de ofertas de servicios de la medición online para el mercado español elaborado por la mesa de contratación digital. El concurso estaba abierto a cualquier candidato que pudiera tener una base operacional en España y que garantizara el cumplimiento de las siguientes condiciones:

- El universo de la medición deberá estar consensuado por el mercado, de forma que el operador de la medición use los referenciales que a tal fin el mercado ha establecido a partir del *Estudio General de Medios* (*EGM*).
- Utilización de la metodología híbrida, basada en la integración de las mediciones panel y censal, en el sistema de medición digital, de acuerdo con las necesidades del sector.
- Formación de un comité técnico de clientes con capacidad de intervenir en decisiones del mercado local.
- Compromiso del ofertante a ser auditado de manera independiente en las diferentes partes que conforman la medición (*AIMC*, 2011).

Además, en el pliego de condiciones se detallaban y explicaban cuáles eran los aspectos que conformaban la medición digital: 1) Población; 2) Tipología de uso; 3) Aspectos cuantificables; 4) Explotación de datos y 5) Especificaciones técnicas de la medición online.

A finales de ese mismo mes se publicó un documento que pretendía responder a las dudas generadas a raíz de la publicación de la petición de ofertas de servicios de la medición online para el mercado español. Meses más tarde, en septiembre de 2011 se dieron a conocer las empresas que se habían presentado al concurso: *Kantar Media*, *Comscore* y *Nielsen Online*. Finalmente, en octubre de 2011, las juntas directivas de *IAB* y *AIMC* (*Asociación para la Investigación de los Medios de Comunicación*) anunciaron que la empresa ganadora del concurso era *Comscore*. En consecuencia, *Comscore* fue el operador recomendado por la industria. Es relevante señalar, como mencionó Pepe Cerezo en la entrevista realizada por las autoras, el hecho de que sea únicamente una recomendación de dos asociaciones del sector a la industria. No es un concurso en el que quien gane tiene exclusividad, sino que tras dicha recomendación son las empresas del sector las que firman la relación contractual con el medidor.

En junio de 2015, tras la alianza estratégica global entre *Kantar Media* y *Comscore*, la comisión de seguimiento para la medición online (formada por miembros del *IAB Spain* y la *AIMC*) propuso la creación de un grupo de trabajo para estudiar el escenario de la medición digital en España. El propósito de ese grupo de trabajo era

> "dibujar un nuevo marco que recoja las necesidades y prioridades actuales del mercado español en relación con la medición digital" (*AIMC*, 2015).

Los quince integrantes del grupo representaban a los principales actores del mercado español: medios de comunicación, agencias de medios, audiovisual, *mobile*, redes publicitarias, compra programática, *digital signage* y anunciantes. Entre todos debían crear una propuesta para negociar con *Comscore* que sirviera para revisar y actualizar el acuerdo marco.

Dos años más tarde, en marzo de 2017, se prorrogó otros dos años más (2017-2018) el acuerdo marco firmado con *Comscore* en el año 2011. Esta prórroga supuso actualizar el convenio pero también asumir nuevos compromisos relativos a los siguientes aspectos:

- incorporación en el panel de nuevos dispositivos y sistemas operativos de acceso en movilidad;
- medición de vídeo multiplataforma;
- servicios de control de calidad locales;
- proporcionar una solución para la medición en dispositivos móviles de menores de 18 años;
- desarrollo y mejora de las herramientas de explotación (*AIMC*, 2017a).

No obstante, la comisión de seguimiento ya señaló la conveniencia de abrir un concurso competitivo para valorar las mejores posibilidades para el mercado español.

Dos meses más tarde, la comisión de seguimiento, a la que se incorporó también la *Asociación Española de Anunciantes* (*AEA*), creó una nueva mesa de contratación para el concurso de medición de audiencias digitales en España. Esta mesa de contratación estaba formada por representantes de las agencias de medios, medios nativos online, grupos editoriales, revistas, televisión, radio, red publicitaria, *digital signage* y anunciantes. Se decidió que la mesa contara con una consultora (*Evoca*) que ejerciera de coordinadora de las propuestas presentadas.

El 22 de diciembre de 2017 la *AIMC*, el *IAB* y la *AEA* emitieron la petición de ofertas de servicios, elaborada por la mesa de contratación, para la adjudicación de la medición online en España. El pliego de condiciones recogía los requisitos técnicos para la medición digital en el mercado español desde 1 de enero de 2019 y el 31 de diciembre de 2021, con una posible prórroga de dos años (2022/2023). La finalidad del concurso era

> "establecer un sistema de medición digital que se constituya en el referente nacional de la medición de audiencias y contratación de campañas publicitarias digitales gracias a su utilización generalizada por parte de los anunciantes, las agencias de medios y los medios digitales" (*AIMC*, 2017b).

El concurso se convocó para establecer una medición de audiencias digitales consensuada para el mercado español, teniendo en cuenta que esta debía ser flexible para adaptarse a los cambios.

El concurso, al igual que el anterior, estaba abierto a cualquier candidato que pudiera garantizar una estructura operacional en España y que siguiera las siguientes recomendaciones, muy similares a las del concurso anterior a excepción de las indicaciones sobre la metodología donde ya no se indica que esta debiera ser híbrida:

- El universo de la medición deberá estar consensuado por el mercado, de forma que el operador de la medición use los referenciales que a tal fin el mercado ha establecido a partir del *Estudio General de Medios* (*EGM*).
- Utilización de las metodologías necesarias para ofrecer datos censales y sociodemográficos basados en panel y enriquecidos con otras posibles fuentes de datos que los candidatos consideren oportunas.
- Formación de un comité técnico de clientes con capacidad para intervenir en las decisiones del mercado local. Es vocación de esta petición de ofertas de servicios que el Comité de Clientes tenga potestad de decisión y resolución de todos los conflictos que pudieran surgir entre cualquiera de los clientes y el medidor. En el caso de que un conflicto no se pudiera resolver en primera instancia, el Comité de Clientes lo elevará a la Comisión de Seguimiento que resolverá en última instancia.
- Compromiso del ofertante a ser auditado de manera independiente en las diferentes partes que conforman la medición (*AIMC*, 2017b).

Se destacó también que dada la constante evolución metodológica de la medición de las audiencias digitales se valoraría de forma positiva la mejora de esta propuesta. Además, en el pliego de condiciones se detallaban y explicaban cuáles eran los aspectos que conformaban la medición digital (ver Anexo): 1) Población; 2) Tipología de uso; 3) Aspectos cuantificables; 4) Explotación de datos; 5) Medición publicitaria y 6) Especificaciones técnicas. Estos epígrafes eran coincidentes con los del anterior pliego de condiciones a excepción de la medición publicitaria que no estaba incluida en el anterior como un aspecto independiente.

Tal como se mencionaba en el pliego de condiciones, la mesa de contratación publicó en enero de 2018 las respuestas a las principales dudas planteadas a raíz de la petición de ofertas de servicios por los posibles participantes. Estas cuestiones se dividieron en cinco apartados temáticos: 1) aclaración de conceptos; 2) preguntas relativas al *EGM*; 3) preguntas relativas al panel; 4) otros; 5) garantías, costes y *pricing*.

En abril la mesa de contratación anunció que *Comscore* era el medidor mejor valorado entre todas las propuestas presentadas. Se consideró que era el que más se adecuaba a la petición de ofertas y servicios. Sin embargo, también se anunciaba que se abriría un periodo de negociación con *Comscore* con el fin de que diera respuesta a una serie de necesidades propuestas por la mesa de contratación, de forma que la resolución del concurso estaba supeditada a los resultados de dicha negociación.

4.1.1. Comparativa de los dos concursos

A continuación se realizará un análisis comparativo de la petición de ofertas de servicios entre el primer concurso (2011) y el segundo (2017) con el fin de detectar qué aspectos de la medición digital son los más relevantes para la industria y cuáles se han modificado en el transcurso de los años.

En relación al primer epígrafe (1. Población), la edad de la misma continúa siendo a partir de cuatro años.

En cuanto al margen temporal de acceso a internet en el año 2011 era de 12 meses mientras que en la propuesta actual es el último mes.

El segundo epígrafe (2. Tipología de uso) apenas varía de un concurso a otro, únicamente cabe señalar que en el primero aparecían mencionadas las consolas como dispositivos de acceso mientras que en el actual se eliminaron y se incorporaron, por ejemplo, los smartphones como dispositivos de origen del consumo con entidad propia. Se explicita que se tendrán en cuenta todos los equipos utilizados para navegar por internet con un umbral mínimo de penetración en relación a la población total de usuarios. También se introduce la categoría de Comunidad Autonóma como indicador del lugar del consumo, aunque se valora también una mayor granularidad y se elimina como espacio de consumo el lugar público (colegios, locutorios) que aparecía en la anterior convocatoria.

El apartado (3. Aspectos cuantificables) es el que mayor número de cambios introduce respecto al pliego de condiciones de la oferta anterior. Mientras que en el primer concurso únicamente se diferenciaba entre métricas de audiencia [usuarios únicos/cobertura, tiempo de consumo, tiempo de consumo efectivo (deseable), frecuencia, páginas vistas, procedencia del tráfico, tráfico distribuido] *streams* y métricas de *engagement* (deseable), en el actual concurso se distingue entre: métricas de audiencia (usuarios únicos/cobertura, tiempo de consumo, páginas vistas, procedencia del tráfico, tráfico distribuido y visitas y promedio de usuarios únicos diarios), métricas de audio (por tipo de consumo y plataforma y según el contenido sea publicitario o no) y métricas de vídeo (por tipo de contenido, por vídeo distribuido en plataformas de terceros y según el contenido sea publicitario o no). Es evidente el alto grado de sofisticación y granularidad de los aspectos cuantificables respecto de un concurso al anterior. Resulta llamativo también que en ambos concursos se considere deseable (aunque no obligatorio) obtener información de métricas de audiencia de contenidos como los widgets, newsletters/emails, advergaming, RSS feeds y podcasts (únicamente en el primer concurso) y apps (solamente en el segundo concurso). Y ya por último, en relación con este apartado cabe destacar que, debido al actual ecosistema mediático, se han incluido en la petición de ofertas de 2017 dos menciones expresas a la medición de players de vídeo de terceros y a las nuevas plataformas de contenido audiovisual bajo suscripción.

En el cuarto epígrafe (4. Explotación de datos) se continúa solicitando que los aspectos cuantificables se midan de forma continuada ofreciendo datos mensuales y que la desagregación máxima de los datos de la medición se correspondan con la unidad temporal "hora". Cabe señalar que, mientras que en el primer concurso, se exigía que los datos de la medición estuvieran disponibles de forma diaria en el concurso actual únicamente se indicaba que el medidor mostrara su capacidad para ofrecer el dato diario.

Respecto a la categorización de los datos, las indicaciones recogidas en el primer concurso eran muy generales y escuetas. Solamente se recogían dos apuntes: por una parte que la categorización debía ser flexible con el objetivo de adaptarse a la evolución del mercado local; por otra parte, que la información de la medición debía obtener la máxima desagregación por site/sección y permitir la agregación en función de los criterios del usuario.

En el segundo concurso las instrucciones para la categorización estaban más desarrolladas y explicaban cómo debía realizarse la creación de categorías en función siempre del dato multiplaforma. Estas reglas debían ser objetivables vía tráfico y aplicables para todos los sites. Se hace una mención explícita hacia los contenidos pirateados, solicitando que el medidor explicite cómo se controlan, detectan y atribuyen sus consumos. También se incluía un apartado específico sobre el etiquetado que no aparecía en la anterior petición de ofertas.

El quinto epígrafe de la actual petición no aparecía recogido como un apartado independiente en la anterior sino que formaba parte de los aspectos cuantificables. Ambas peticiones exponen las métricas relativas a pre-evaluación y a la post-evaluación de la campaña. Mientras que los parámetros para realizar la pre-evaluación son los mismos en ambos concursos, estos cambian a la hora de llevar a cabo la post-evaluación. Se incorpora la cobertura *in target*, los impactos se desglosan por dispositivo y en los *gross rating points* (*GRP*) se analiza la cobertura multi-dispositivo, sobre impresión y sobre visionado. Asimismo, se incluyen otras métricas adicionales como: *viewability*, geográfico, *brand safety* y tráfico no válido.

Por último, ambas peticiones de ofertas contemplaban el apartado sobre las especificaciones técnicas de la medición online con el objetivo de lograr una única medición para evaluar las audiencias y la contratación de las campañas publicitarias digitales. Para ello, en ambos concursos se diferenciaba entre la medición del panel y la medición censal:

- Medición del panel. Los requerimientos técnicos sobre el diseño del panel (captación, gestión y otros usos) son prácticamente iguales en ambos concursos. La diferencia fundamental radica en el número de integrantes del panel. En ambas peticiones se apuntaba que los candidatos debían presentar una propuesta con el tamaño y la estructura que aconsejara las especificaciones técnicas. No obstante, en la primera se solicitaba una estimación de costes para tres tamaños de muestra (20.000 individuos, 25.000 individuos y 30.000 individuos) mientras en el segundo concurso se indicaba que el número de panelistas mínimo era de 25.000 y la desagregación por dispositivos era obligatoria. Además, se precisaba que el panel debía ser representativo para cinco variables sociodemográficas seleccionadas obligatorias y una sexta valorable (para móvil y PC). También se mencionaba el fenómeno del adblocking.

- Medición censal. Aunque ambos concursos coinciden al excluir las especificaciones técnicas de la analítica web, en el actual se menciona la necesidad de incluir este sistema ya que hay que utilizarlo en la medición de las audiencias digitales finales mediante el *factor de humanización multidispositivo* (FHM), un concepto no incluido con anterioridad.

Cabe señalar que en el primer concurso también se contemplaba un apartado específico para la medición híbrida, algo que se suprime en la siguiente convocatoria.

En definitiva, las necesidades de la industria se han diversificado debido al cambiante entorno tecnológico en el que emergen las exigencias. La consolidación de nuevos dispositivos de acceso, la relevancia del dato multiplataforma o la incorporación del factor de humanización multidispositivo son aspectos de gran interés para el mercado actual.

4.2. Claves de la propuesta de *Comscore*

En la introducción a su propuesta, *Comscore* definió los tres campos de la medición digital actual: el metodológico (paneles de medición de audiencia), el tecnológico (medición censal) y la colaboración con los grandes actores del mercado digital para desarrollos técnicos que facilitaran identificar y medir otros consumos. Como consecuencia, a día de hoy la medición digital en España se construye sobre estos tres pilares básicos: 1) los paneles, 2) las mediciones censales y 3) los datos procedentes de otros operadores digitales colaboradores.

Comscore mide la

> "audiencia de contenido (página, aplicación, audio y vídeo) y publicidad (*display* y vídeo) en entornos digitales consumidos desde desktop, smartphones y tabletas" (*Comscore*, 2019).

Para ello utiliza los paneles (medición muestral) y la tecnología de etiquetados (medición censal) a excepción de los sitios no etiquetados en los que los indicadores se extrapolarán del panel. En el proceso de unificación, la cuantificación de la audiencia se realiza a partir del dato censal (con una corrección proporcionada por el panel) y las características demográficas provienen del panel (*Comscore*, 2019). De este modo se genera una medición unificada (muestral + censal). A continuación se explica en profundidad cada una:

4.2.1. Medición muestral

Se lleva a cabo mediante dos paneles: a) uno para *desktop* y b) otro para los dispositivos móviles. El compromiso de *Comscore* es mantener a 30.000 individuos entre los dos paneles. Los objetivos fundamentales de esta medición son:

- Medir la audiencia de sitios web y aplicaciones no etiquetados (para los sitios etiquetados se contabiliza el tráfico desde todas las plataformas desde enero de 2014).
- Aportar el componente panel al proceso de unificación de los sitios etiquetados.
- Aportar datos demográficos de los usuarios de cada una de las plataformas.
- Aportar indicadores sobre la interrelación de consumos entre entidades.
- Ofrecer información sobre las interrelaciones de consumo entre sitios web y aplicaciones (*Comscore*, 2019).

a) El panel *desktop* es representativo de la población online española de cuatro y más años que tuviera acceso a internet durante el último mes. El compromiso de *Comscore* radicaba en mantener la muestra por encima de los 25.000 panelistas y actualmente cuentan con 28.687[6]. La gran mayoría (27.807) son panelistas de hogar y 880 lo son de trabajo. A la hora de reclutar a los individuos para el panel se recurrió a un doble método: mediante un programa de afiliación, y por medio de una serie de proveedores de aplicaciones (*third party application providers*, *TAP*), cabe destacar que en ninguno de estos métodos se muestra directamente el nombre de *Comscore*. Al iniciar el registro al futuro panelista se le piden datos sociodemográficos e información sobre el hogar y su composición. A partir de ese momento puede descargar el software de *Comscore* a través del cual se mide pasivamente el comportamiento online del panelista a través de ese equipo. *Comscore* señala que prima la captación permanente de los panelistas debido a las frecuentes incidencias propias de las tecnologías.

Los audímetros en *desktop* miden el tráfico en protocolo seguro (https), el registro de consumo de aplicación y el consumo realizado desde un navegador nativo o no.

b) El panel móvil se emplea para a medir los dispositivos móviles *Android Phone*, *iPhone* e *iPad*. Las tabletas *Android* únicamente se miden de forma censal. Se valoró poner en marcha un panel de *Android Tablet* para el mercado español, pero este todavía no se ha aplicado. Cabe destacar que debido a las restricciones legales no es posible instalar audímetros en dispositivos móviles de menores de edad. Por ello este panel representa a la población online española de dieciocho años y más con acceso a internet en el último mes. El panel está formado por 10.890 panelistas. La muestra de estos se distribuye de la siguiente manera: *Android Phone* (6.297 panelistas); *iPhone* (2.062 panelistas) e *iPad* (1.730 panelistas) a fecha de abril 2020[7].

El reclutamiento del panel móvil se lleva a cabo mediante un doble procedimiento, online y físico. El reclutamiento online es prácticamente igual que el realizado para el panel *desktop* (mediante un programa de afiliación y por medio de una serie de proveedores de aplicaciones (*third party application providers*, *TAP*). Para el reclutamiento físico, realizado por un proveedor, se utilizan métodos de contacto telefónicos o personales sobre bases de datos de panelistas y se les propone una colaboración con incentivos.

Debido a los habituales desequilibrios entre el perfil de los panelistas y el universo a medir, ambos paneles, el *desktop* y el móvil, se equilibran a través de la ponderación. Para el panel *desktop* se utilizan las siguientes variables: a) Sexo y edad, b) Regiones (Comunidades Autónomas), c) Índice socioeconómico (*Comscore* se había propuesto valorar en 2019 la incorporación de la variable Índice socioeconómico para indicadores Multiplataforma, sin embargo, a fecha de junio de 2020 todavía no se ha incorporado), d) Tamaño del hogar y e) Presencia de niños; mientras que para el panel móvil las variables se reducen a: a) Sexo y edad, b) Presencia niños y c) Regiones (Catalunya, Centro, Madrid, Este, Norte, Sur).

Los audímetros en los dispositivos móviles miden la navegación y las aplicaciones móviles, la navegación segura (https), desde un navegador nativo y no nativo o desde un navegador embebido.

4.2.2. Medición censal

Tal como se recogía en la propuesta de 2011, *Comscore* suministró tecnología de etiquetado a los medios españoles con el fin de implementar la medición unificada. A principios de 2018 la red de etiquetado (que abarca contenidos html, *players* de vídeo, aplicaciones móviles y campañas publicitarias) estaba instalada en gran parte de los sitios comercializados (nacionales e internacionales) en el mercado español. Según afirma *Comscore*, aproximadamente un 95% de los dispositivos móviles y no móviles españoles (más de 54 millones de dispositivos) reciben al cabo del mes alguna de sus etiquetas, y por tanto, se cuantifica su consumo (*Comscore*, 2019).

Las tecnologías censales de medición son las etiquetas (tags) o SDks, una tecnología que debe ser flexible y adaptada a la fragmentación del consumo actual. Cabe destacar que desde enero de 2017 se utiliza el *streaming tag* para medir contenidos de vídeo en *desktop* y en dispositivos móviles. La auditoría de la medición censal se realiza a través de la empresa estadounidense *MRC*.

4.2.3. Unificación de los datos

Comscore proporciona indicadores que combinan la información recopilada a través de las fuentes censales y las muestrales. Por ello, muestra un dato de medición multiplataforma (*unified digital measurement*, *UDM*) procedente de la información recogida por la red censal y por los paneles. De modo que aporta un indicador mensual de personas deduplicando el consumo digital desde las diferentes plataformas y los diferentes modos de acceso (navegador o aplicación).

4.2.4. Universo de medición

Desde el año 2010 el universo de referencia es el proporcionado por el *EGM*. Se diferencia entre:

a) entorno *desktop*: individuos de 4 y más que accedieron a internet en el último mes;

b) dispositivos móviles: individuos de 18 y más (universo estándar) y 13 y más para los informes extendidos que complementan al dato oficial.

Se debe tener en cuenta que este universo se actualiza con cada oleada del *EGM*, es decir, tres veces al año. *Comscore* apunta que está trabajando para la unificación del universo a 14 y más años en todos sus proyectos, sin embargo, todavía no se ha aplicado.

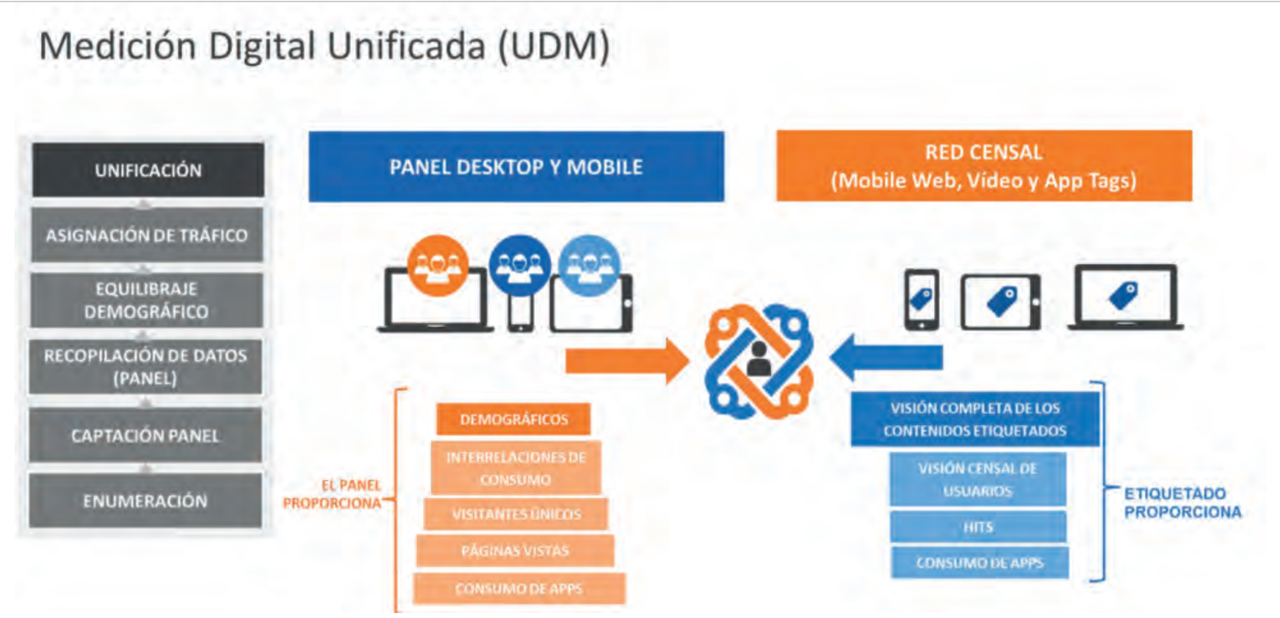


Imagen 1. Medición digital unificada
Fuente: *Comscore*

4.2.5. Medición publicitaria

En este caso el universo de medición continúa siendo la población de 4 y más años en dispositivos *desktop* y población de 18 y más años en dispositivos móviles (smartphones y tabletas). En esta medición también se realiza un proceso de unificación entre: 1) datos de los paneles, 2) datos procedentes de los acuerdos con otras compañías y 3) etiquetados de los contenidos publicitarios.

En relación con la medición publicitaria multiplataforma *Comscore* facilita dos servicios de pre evaluación publicitaria (*reach & frequency*) y de evaluación de campañas (*validated campaign essentials*) con los que cuantificar y cualificar a la audiencia:

Tabla 2. Universo *Comscore*

	Universo *EGM Comscore* enero de 2018
Total población digital (*TDP*)	31.920.954
Usuarios de dispositivos *desktop* (4+)	21.908.433
Usuarios de dispositivos móviles (18+)	28.189.824
Móviles *Android*	25.682.755
Móviles *Phone iOS*	2.278.934
Tablet *Android*	5.343.806
Tablet *iOS*	1.459.061

Fuente: *Comscore*.

1) *Reach & frequency*: consigue valorar campañas (*display* y vídeo) en *desktop* como en dispositivos móviles.

2) *Validated campaign essentials*: mediante este instrumento de verificación se muestra: por una parte información sobre visitantes únicos impactados por la campaña, frecuencia, cobertura, *GRP*s, información demográfica e intereses temáticos basados en información de navegación; por otra parte: visibilidad, tráfico no válido, seguridad de marca e impresiones dentro de la geografía.

Ambas se basan en la integración del panel con las cifras censales medidas a través de la Medición digital unificada (UDM).

4.2.6. Instrumentos de medición

Facilita diferenciar entre la audiencia multiplataforma y la audiencia por plataformas. La medición multiplataforma de *Comscore* muestra indicadores deduplicados de audiencia, es decir, de individuos con consumo desde dispositivos *desktop*, *smartphone* y tabletas. En los casos de los dispositivos móviles se mide el consumo desde el navegador y la aplicación para *iOs* y *Android*. Este proceso se realiza por la vía de la humanización de la cuantificación censal.

Por una parte, para la medición de la audiencia multiplataforma se muestran dos instrumentos: *MMX multiplataforma* y *Video Metrix multiplataforma*. La primera proporciona la audiencia deduplicada de individuos que consumen sitios web tanto desde *desktop* como desde móviles (smartphones y tabletas de los dos sistemas operativos principales). Este dato es el estándar de medición de la audiencia española. Los principales indicadores que proporciona son: total de visitantes únicos, total de visionados por visita, media de visionados por visitante, etc. (tabla 3).

Tabla 3. Principales indicadores *MMX multiplataforma*

Total Digital Population*	**Desktop**	**Mobile**
Person and Impression based metrics		
Total Unique Visitors/Viewers (000)	Total Unique Visitors/Viewers (000)	Total Unique Visitors/Viewers (000)
% Reach	% Reach	% Reach
% Composition UV	% Composition UV	% Composition UV
Composition Index UV	Composition Index UV	Composition Index UV
Total Views (MM)	Total Views (MM)	Total Views (MM)
Total Visits (000)	Total Visits (000)	Total Visits (000)
Average Views per Visit	Average Views per Visit	Average Views per Visit
Average Views per Visitor	Desktop-Only UV (000)	Mobile-Only UV (000)
	Video-Only UV (000)	Page Views (MM)
	Page Views (MM)	
	Video Views (000)	
	Composition Index PV	
	Composition Index Videos	
Duration based metrics		
Total Minutes (MM)	Total Minutes (MM)	Total Minutes (MM)
Average Minutes per View	Average Minutes per View	Average Minutes per View
Average Minutes per Visit	Average Minutes per Visit	Average Minutes per Visit
Average Minutes per Visitor	Average Minutes per Visitor	Average Minutes per Visitor
Composition Index Minutes	Composition Index Minutes	Composition Index Minutes
* *MMX Multiplataforma* proporciona acceso a *Total Digital Population*. El acceso a indicadores desktop, mobile y vídeo requiere que el Cliente esté suscrito a *MMX Desktop*, *Mobile Metrix* y *Video Metrix*.		

Fuente: *Comscore*

Tabla 4. Principales indicadores *Video Metrix multiplataforma*

Total Digital Video	**Desktop**	**Mobile**	
Measures	Measures	Platform	Measures
Reach (000)	Reach (000)	Total Mobile	Reach (000)
% Composition Reach	% Composition Reach	All Smartphones	% Composition Reach
Composition Index Reach	Composition Index Reach	iPhone	Composition Index Reach
Videos (000)	Videos (000)	Android Phone	Videos (000)
Videos per Viewer	Videos per Viewer	All Tablets	Videos per Viewer
Minutes per Viewer	Minutes per Viewer	iPad	Minutes per Viewer
Minutes per Video	Minutes per Visit (Session)	Android Tablet	Minutes per Video
Total Minutes (MM)	Minutes per Video		Total Minutes (MM)
% Ads (Videos)	Total Minutes (MM)		% Ads (Videos)
% Ads (Duration)	% Ads (Videos)		% Ads (Duration)
Ads Per Content Video	% Ads (Duration)		Ads Per Content Video
Content Minutes Per Ad Minute	Ads Per Content Video		Content Minutes Per Ad Minute
% Reach Digital Pop	Content Minutes Per Ad Minute		% Reach Digital Pop
GRPs Digital Pop	% Reach Digital Pop		GRPs Digital Pop
% Reach Total Pop	GRPs Digital Pop		% Reach Total Pop
GRPs Total Pop	% Reach Total Pop		GRPs Total Pop
	GRPs Total Pop		

Fuente: *Comscore*

Mediante *Video Metrix multiplataforma* se presenta la información deduplicada del consumo de vídeo (tanto *streaming* como descargas progresivas[8]) en *desktop* y dispositivos móviles (smartphones y tabletas). Se miden los vídeos iniciados por los usuarios como los generados automáticamente, así como los vídeos *in-stream* y los *in-banner* (los vídeos de menos de 3 segundos se excluyen de los informes). Algunos de los principales indicadores que muestra son: alcance, espectadores únicos, tiempo de visionado, *GRP*s.

Cabe destacar que *Comscore* firmó un acuerdo con *Google* mediante el cual puede aportar indicadores de consumo de vídeo de contenido en la plataforma *YouTube*. En 2019 estaba previsto que se ofrecieran indicadores de dispositivos *over the top* (OTT) en el interfaz de *Video Metrix*.

Tabla 5. Principales indicadores *MMX* (*desktop*)

MMX Desktop only	
Measures	
Total Unique Visitors (000)	Average Minutes per Page
% Reach	Average Usage Days per Visitor
% Composition Unique Visitors	Average Minutes per Visitor
Composition Index UV	Average Pages per Visitor
Composition Index PV	% Composition Pages
Average Daily Visitors (000)	% Composition Minutes
Median Age	Total Visits (000)
Mean Age	Average Minutes per Visit
Total Minutes (MM)	Average Visits per Visitor
Average Minutes per Usage Day	Average Visits per Usage Day
Total Pages Viewed (MM)	Average Pages Per Visit
Average Pages per Usage Day	

Fuente: *Comscore*

Por otra parte, para la medición de la audiencia por plataformas también se proponen tres instrumentos, dos de ellos únicamente para desktop: *MMX* (únicamente para *desktop*) y *Mobile Metrix* (smartphones y tabletas *Android* e *iOS*) y *Video Metrix* (*desktop*). Mediante *MMX* se puede medir la audiencia y realizar la planificación publicitaria basada en la medición digital unificada.

Algunos de los parámetros que muestra son: visitantes únicos, media de minutos por página, alcance, etc. (tabla 4). A través de *Mobile Metrix* se examina y pre-evalúa la audiencia móvil. La información que puede facilitar es de cada plataforma individual o del conjunto de todas y también del consumo a través de navegador o aplicación (conjunto o por separado) (tabla 5).

Por último, *Video Metrix* muestra la información sobre el consumo de vídeo *desktop*, y aporta datos de audiencia de contenido y de publicidad.

Respecto al análisis publicitario por plataformas se presentan los mismos instrumentos que se emplean en la medición publicitaria multiplataforma:

1) *Reach & frequency* (*R/F*): se pueden valorar los planes de medios (cobertura, frecuencia media, GRPs, volúmenes de impresiones y costes de una campaña en medios digitales). Las mediciones son similares a las facilitadas por los estándares de medición de medios tradicionales.

Tabla 6. Indicadores *Mobile Metrix*

Mobile Metrix			
	Access Method	Access Method	Access Method
	Mobile Web & App	Mobile Web only	Mobile App only
Platform	Measures	Measures	Measures
Total Mobile	Total Unique Visitors (000)	Total Unique Visitors (000)	Total Unique Visitors (000)
All Smartphones	Smartphone-Only UV (000) *	Smartphone-Only UV (000) *	Smartphone-Only UV (000) *
iPhone	Tablet-Only UV (000) *	Tablet-Only UV (000) *	Tablet-Only UV (000) *
Android Phone	% Reach	% Reach	% Reach
All Tablets	% Composition Unique Visitors	% Composition Unique Visitors	% Composition Unique Visitors
iPad	Composition Index UV	Composition Index UV	Composition Index UV
Android Tablet	Average Daily Visitors (000)	Average Daily Visitors (000)	Average Daily Visitors (000)
	Total Minutes (MM)	Total Minutes (MM)	Total Minutes (MM)
	Average Minutes per Visitor	Total Pages Viewed (MM)	Average Minutes per Visitor
		Average Minutes per Visitor	
		Total Visits (000)	
		Average Minutes per Visit	
		Average Visits per Visitor	
	* These measure are not applicable to all platforms.		

Fuente: *Comscore*

2) *Validated campaign essentials* (*vCE*): puede conocer el rendimiento de la campaña (informes del número de impresiones, los individuos impactados, su perfil, la cobertura alcanzada y los GRPs generados) a partir del tercer día de campaña.

4.2.7. Fenómenos que pueden afectar a la medición

Comscore señala que hay dos fenómenos destacables que pueden afectar a la medición: los *adblockers* y el tráfico no válido

> "todo aquel que no se lleva a cabo por humanos (*spiders*, robots, etc.), el tráfico fraudulento (por ejemplo, *iframes* dentro de *iframes* que saltan como *pop-under*) así como el que está fuera del ámbito geográfico a considerar, es decir las impresiones que se han lanzado fuera de la zona geográfica estipulada (España)" (*AIMC*, 2018).

Comscore establece la siguiente tipología dentro del tráfico no válido: a) usuarios con características no válidas; b) comportamientos no humanos y c) tendencias anómalas de tráfico. Para tratar de identificarlo se llevaron a cabo las siguientes acciones: por una parte, en 2014 *Comscore* adquirió e integró en su estructura la compañía *MdotLabs*, especializada en la detección de tráfico. Asimismo, *Comscore* desarrolló algoritmos de identificación de tráfico no válido apoyados sobre: el etiquetado de medición de la audiencia, el etiquetado de la herramienta de evaluación publicitaria *validated Campaign Essentials* (*vCE*) y los paneles de individuos.

Por otra parte, desde la *AIMC* se indicaba que se valoraría la información sobre este fenómeno reciente. El propósito no era reclutar panelistas que no utilizaran bloqueadores, porque supondría un sesgo en la muestra, sino que se aportaran datos sobre la incidencia en la medición. Desde *Comscore* se constató que a partir del año 2016 el uso de bloqueadores se incrementó en España pero aún así considera que los *adblockers* tienen un impacto mínimo en la medición de la audiencia.

4.2.8. Respuesta de la comisión de seguimiento

Tras varios meses de negociación, en octubre de 2018 la comisión de seguimiento anunció que, a pesar del esfuerzo realizado por *Comscore*, no se satisfacían las exigencias expuestas por la mesa de contratación para la medición online en el mercado español. Por ello se decidió, por una parte, proponer un acuerdo temporal con *Comscore* (no superior a dos años) y por otra parte, plantear la búsqueda de otras alternativas que cubrieran realmente las necesidades del mercado.

En este contexto, en enero de 2019 se firmó un nuevo convenio marco de colaboración para la implantación de un sistema de medición digital en España entre la *AIMC*, *IAB*, *AEA* y *Comscore*. Fruto de la reunión de *Comscore* y la mesa de seguimiento, *Comscore* se comprometió a incorporar a su propuesta los siguientes requerimientos:

En primer lugar, en relación con sus clientes, se incorpora un perfil técnico que supervise la implementación de códigos de medición y también apoyo en las incidencias y se da acceso a los últimos 36 meses para clientes de España que hayan mantenido una suscripción activa

> *Comscore* informa que hay dos fenómenos destacables que pueden afectar a la medición: el tráfico no válido y los *adblockers*

ininterrumpida durante dicho período de tiempo. También se apunta la necesidad de redefinir la estructura y funciones del Comité de Usuarios.

> En octubre de 2018, la comisión de seguimiento anunció que, a pesar del esfuerzo realizado por *Comscore*, no se satisfacían las exigencias expuestas por la mesa de contratación para la medición online en el mercado español

En segundo lugar, relacionado con los aspectos técnicos:

- hay un compromiso por tener un mínimo de 8.000 panelistas móviles activos en España a 31 de diciembre de 2019. Como se ha comprobado, en la actualidad el número de panelistas es de más de 10.000.
- mayor desglose en los datos de individuos mayores de 55 años. Esta posibilidad todavía se encuentra en fase de análisis.
- nuevo instrumento para el seguimiento de etiquetado de vídeo y de las redes publicitarias. Esta nueva herramienta ya se ha aplicado.

Por último, respecto a la auditoría y certificación, *Comscore* se compromete a mantener la auditoría muestral y metodológica de *AIMC* y a presentar la propuesta de certificación de la herramienta censal.

El cumplimiento de convenio, con un periodo temporal máximo de cumplimiento de dos años, se lleva a cabo a través de la comisión de seguimiento.

4.3. Entrevistas a representantes del sector de la medición digital

Tras el análisis realizado, la segunda fase de la investigación abordó una serie de entrevistas a expertos y representantes del sector audiovisual[9] con el fin de que contrastaran la situación y retos del sistema de medición en España. A continuación se incorporan las respuestas de los entrevistados en función de las áreas temáticas que se definieron en las entrevistas realizadas.

En relación con su conformidad con el sistema actual de medición, existe una evidente disparidad de opiniones entre los expertos entrevistados. Uno de los dos participantes en la mesa de contratación manifestó que en términos generales están de acuerdo si bien son conscientes de que se puede mejorar. Otro considera que es

> "es claramente insuficiente. La medición no se corresponde con el nivel de inversión dedicado a digital".

Entre el resto de los entrevistados también se mantiene la disparidad de criterios, uno de ellos considera que

> "es el mejor sistema de medición de audiencias en internet que hemos tenido nunca"

y otro recuerda que

> "en medición hemos de ser conscientes que lo perfecto o bien no existe, o no es económicamente viable".

Un participante más crítico explica que hay evidentes errores en el trabajo de *Comscore* como empresa medidora y que además no cuenta con una estructura propia por lo que se dificulta el trabajo al tener que acudir a Estados Unidos para la solución de cualquier incidencia.

Un aspecto en el que la mayoría de los entrevistados sí coinciden es que estamos ante un sistema insuficiente en el contexto actual y que difícilmente refleja el consumo digital en España. Cabe señalar que muchos de ellos indicaron la complejidad que conlleva este tipo de medición por los continuos cambios que se suceden y la exigencia y sofisticación del mercado español. A ello se le añade el hecho de la cantidad de agentes que están involucrados en el concurso de medición con intereses muy diferentes y variadas posibilidades de hacer frente a la inversión necesaria para financiar los costes que conlleva la medición digital.

> Los entrevistados coinciden en que es un sistema claramente insuficiente en el contexto actual y que difícilmente refleja el consumo digital en España

Otra cuestión que destacaron como determinante para la medición es el particular proceso de selección del medidor, que en principio, y según está planteado en el mercado español, es únicamente una recomendación que realiza la industria a través de las tres asociaciones representativas.

Entre las fortalezas del sistema actual, en su mayoría destacan que es fruto de un consenso del mercado y que otorga cierta estabilidad porque se intercambia

> "en base al dato de *Comscore*, una cantidad muy importante de dinero que financia la industria".

Coinciden en señalar el consenso del mercado en el dato como moneda de intercambio publicitario entre compradores y vendedores. Asimismo, apuntan como fortaleza el sistema híbrido de medición que utiliza.

No obstante también indican una serie de debilidades del sistema actual. En primer lugar coinciden en la necesidad de mejorar la periodicidad de entrega de los datos, carece de sentido ofrecer datos mensuales al necesitar de datos diarios para la toma de decisiones. Estos datos no se corresponden con lo que se comercializa publicitariamente por lo que pierde utilidad para el mercado. Asimismo, otro miembro destaca la deficiente capilaridad geográfica y de medición por dispositivos, así como una cierta opacidad en la construcción del dato por parte de *Comscore*. Los datos proporcionados son meramente de consulta. No es posible desagregarlos, lo que impide disponer de un referencial del consumo digital en España. También indica que el hecho de que el dato pertenezca a la empresa de medición que gana el concurso y no al mercado constituye una debilidad del sistema. Ello comporta grandes desconfianzas entre los medidos de que la neutralidad sea efectiva entre clientes que pagan cantidades muy diferentes de dinero en función de la audiencia que cada uno tiene. Los entrevistados apuntan a que se debe mejorar la representatividad del panel móvil debido a su consumo masivo y preferente para que se adecuara a la realidad del mercado español.

> Las propiedades del mercado español lo hacen interesante, lo que conlleva a que sea elegido como mercado piloto para implantar algunas innovaciones en la medición que puedan ser extrapolables a otros países

Según las manifestaciones de los expertos menos vinculados con la mesa de contratación, estas debilidades dificultan la realización de una planificación adecuada a la realidad por parte del sector al no ahondar lo suficiente en la medición en movilidad con datos públicos entre las diferentes empresas.

Ante la pregunta sobre la comparativa de este sistema con lo establecido en otros países, existe bastante consenso en que el sistema presente en España es bastante avanzado y equiparable al que existe en otros países como Estados Unidos o Gran Bretaña, incluso entre los mejores del mundo. Se deduce por lo tanto, que algunas de las deficiencias apuntadas son cuestiones que afectan a nivel global y no se circunscriben al ámbito español. En varios casos, mencionan que España suele ser un mercado de gran interés por las particulares propiedades del mismo que conlleva a que sea elegido como mercado piloto para implantar algunas medidas nuevas de cara a la medición que puedan ser extrapolables a otros países del entorno.

Ante estas opiniones preguntamos a los expertos cuál sería el sistema de medición ideal. En este sentido, existe un cierto consenso en que sea aquel que mejor cubra mejor las necesidades de la mayoría de los actores del mercado. Concretamente debe ser el que mida la totalidad del consumo que realizan los consumidores, con una medición *crossdevice*, centrada en el usuario y que introduzca técnicas de análisis masivo de datos y de inteligencia artificial para mejorar la precisión del dato.

Tras la recomendación de la *AIMC* de la necesidad de cambiar el modelo de medición y elegir un *joint industry committee* (*JIC*), consultamos a los expertos sobre su opinión acerca de la conveniencia de contar con uno para la medición de audiencias digitales. Existe un consenso casi generalizado al respecto por las ventajas que aporta hacia la financiación del sistema que se necesita. Para algunos sí podría ser una buena posibilidad, siempre que hubiera consenso previo en el mercado mientras que otros lo verían como una vía adecuada siempre que el mercado fuera consciente de lo que supone la creación de un *JIC* en relación a la propiedad de los datos, ejecución de los concursos de medición, etc. No obstante, también señalan la dificultad añadida que conlleva la creación de un *JIC* formado por asociaciones que tienen diferentes políticas de intereses como pueden ser la *AIMC*, la *AEA* y el *IAB*.

En un contexto tan cambiante como el digital, consultamos a nuestro panel de expertos acerca de los retos que debe afrontar la medición digital en España. Las respuestas en este sentido fueron muy variadas, desde la necesidad de mejorar la capacidad económica para pagar la medición, hasta perfeccionar la medición *crossdevice* del mismo individuo junto con un enfoque sin cookies de terceras partes con herramientas certificadas por terceros independientes o incrementar la transparencia y publicidad de los datos. Explican la necesidad de aplicar la metodología *single-source* en la que el individuo es el centro de la medición al margen del dispositivo que emplea para el consumo de medios así como consideran necesario introducir las técnicas de análisis masivo de datos y de inteligencia artificial para mejorar la precisión del dato en todos sus frentes. Se trata también de disponer de datos más claros que consigan cruzarse (por ejemplo, televisión con digital). Uno de los expertos indica que

> "el principal reto es el que tienen que asumir los profesionales y entender que el mundo ha cambiado y que ya nunca tendremos sistemas de medición en los que una fuente externa tenga todos los elementos como para producir datos. Será una combinación de datos avalada por un tercero que garantice uniformidad e independencia".

La última cuestión se refiere al futuro de la medición digital en España de cara al 2021, con un próximo concurso. Se muestran en general esperanzados y consideran que se producirá una prórroga de *Comscore* como medidor recomendado del mercado español.

5. Discusión y conclusiones

En esta investigación se ha examinado, como objetivo principal (O1), la evolución del sistema de medición de la audiencia digital en España, mostrando los indicadores (P1), parámetros (P3) y tecnología (P6) utilizada para la medición de contenido y actividad publicitaria (P5) por *Comscore* como empresa seleccionada para la medición digital en el mercado español, dando respuesta a las preguntas iniciales de investigación. Ha quedado en evidencia que la complejidad del mercado español y la del propio medio online ha dificultado las posibilidades de implantar un sistema de medición más adecuado que el propuesto por *Comscore*.

Tras el análisis de las demandas del mercado español plasmadas en las peticiones de ofertas de servicios de ambos concursos (P2), puede confirmarse la complejidad que entraña disponer de métricas adecuadas y adaptadas a la realidad online. Las necesidades del mercado se han sofisticado e incrementado fruto de la evolución tecnológica de la industria y de alta penetración de internet en la población. En el segundo concurso se percibe un intento de adaptación a un contexto digital más complejo como el cambio en el margen temporal de acceso a internet (que antes era de 12 meses mientras que en la propuesta actual es el último mes), la incorporación de smartphones, o las menciones expresas a la medición de players de vídeo de terceros y a las nuevas plataformas de contenido audiovisual bajo suscripción. Y a todo ello habría que añadirle el hecho de que ahora son tres las asociaciones que proponen el concurso de medición (*AIMC*, *IAB* y *AEA*) (P4), lo que puede suponer un mayor grado de dificultad al proponer una oferta unánime de condiciones que se adapten a los intereses y expectativas de las tres asociaciones.

> Todavía estamos lejos de disponer de un sistema consolidado y consensuado, principalmente debido a que es un asunto que se encuentra en transformación constante por los avances técnicos

En la actualidad todavía estamos lejos de disponer de un sistema consolidado y consensuado, principalmente porque dado que es un objeto de estudio que se encuentra en transformación constante por los avances técnicos, también los métodos de medición se tienen que ir adaptando a esas nuevas necesidades, frente a sistemas muy afianzados como los del audímetro en la televisión. La investigación demuestra que en una cultura de la inmediatez como la actual, los tiempos de la audimetría digital en España son demasiado lentos (en ocasiones superiores al mes) por lo que el valor de esa información se devalúa. Se hace preciso disponer de un dato diario con el que los agentes del mercado puedan poder operar y tomar decisiones y que retrate en un breve periodo de tiempo el consumo digital de la realidad actual. El nivel de desagregación del dato y la posibilidad de extrapolación de los mismos deben ayudar a medir de forma integral los contenidos de los medios y la publicidad.

Las empresas de audimetría y de investigación de mercados en el mundo pertenecen a grandes multinacionales con una visión estratégica internacional que además suelen contar con experiencia de medición en otros medios (radio, prensa o televisión). Internet es un fenómeno global, con retos comunes a múltiples estados, de ahí el reto de contar con alianzas estratégicas internacionales que faciliten el avance en estas técnicas de medición pero que tengan en cuenta también las particularidades de cada uno de los mercados. Según indicaron algunos expertos, algunas de las deficiencias apuntadas son cuestiones que afectan a nivel global y no se circunscriben al ámbito español dada la naturaleza del fenómeno digital. Es fundamental que dichas empresas se adapten al contexto nacional para reflejar con mayor precisión el consumo digital. A pesar de que hubo un incremento en el número de compañías que acudieron al último concurso, resulta llamativo que algunas de las empresas multinacionales de referencia en el sector de la medición de las audiencias opten por no presentarse al concurso en España, quizá porque precisarían disponer de un conocimiento mayor del tamaño del mercado y de la compensación económica que obtendrían si finalmente resultasen seleccionadas.

Debido a su creciente importancia, como se ha comprobado en la reciente crisis de la Covid-19, hay múltiples y determinantes intereses económicos en torno a la medición de las audiencias digitales. De hecho, se trata de uno de los mayores retos de la comunicación digital. La concepción de audiencia como mercancía aquí presente, exige elaborar unos sistemas de monitorización actualizados que requieren fuertes inversiones para afrontar los retos de esta audimetría. Sin embargo, en ocasiones son los propios agentes del mercado quienes más se resisten a emprender esas fuertes inversiones. Además, hay en general un cierto temor a cualquier cambio metodológico por las consecuencias económicas que podrían acarrear.

La investigación concluye, por tanto, que España cuenta con un sistema de medición digital imperfecto en pleno proceso de mejora y actualización. El nuevo concurso previsto inicialmente para el año 2021 puede incorporar otras mejoras siempre que se garantice una inversión suficiente y que el pliego de condiciones del mismo sea coherente con las necesidades de la industria y las posibilidades de financiación. El 15 de julio de 2020 se puso en marcha la convocatoria del nuevo concurso a través de la comisión de seguimiento para la medición digital. El mercado debe decidir cuáles son los retos prioritarios que el nuevo medidor debe satisfacer y también (re)pensar el modelo organizativo de medición de audiencias. Dar respuesta a todas las demandas de los diferentes integrantes del mercado no es una tarea sencilla. Las empresas que concurren al concurso deben cumplir con los requerimientos estipulados, ser transparentes y rigurosas con la metodología que emplean para la extracción de datos, mostrar alternativas metodológicas eficaces y adecuadas a la realidad, así como tener acuerdos con los otros operadores del mercado (*Facebook*, etc.) para que les faciliten los datos de sus plataformas, ya que una parte considerable del consumo digital de los individuos concurre en ellas.

> El nuevo concurso previsto inicialmente para 2021 puede incorporar otras mejoras siempre que se garantice una inversión suficiente y que su pliego de condiciones sea coherente con las necesidades de la industria y las posibilidades de financiación

En relación con los desafíos de la medición digital, objetivo secundario (O2) de esta investigación, uno de los principales retos es la monitorización basada en el individuo y no en el dispositivo, así como la introducción de técnicas de análisis masivo y de inteligencia artificial para incrementar la precisión del dato de manera global. El crecimiento de la inversión en publicidad digital y la alta penetración de los dispositivos móviles en España justifica la necesidad urgente de disponer de datos personalizados de consumo multidispositivo para favorecer una correcta programación de estrategias comunicativas. Durante todo el periodo en el que *Comscore* ha sido el medidor recomendado por la industria (2012-2020) ha optado por emplear la metodología híbrida, a pesar de que en las bases del último concurso no aparece recogida explícitamente la necesidad de continuar con su uso. A la luz de las entrevistas realizadas parece haber cierto consenso en la industria para determinar que el individuo es el centro de la medición al margen del dispositivo que emplea para el consumo de medios. Esta es la clave de la medición online del futuro próximo y ello plantea nuevos interrogantes sobre el reclutamiento de los individuos, la conformación de los paneles, el tipo de panel (activo/pasivo/mixto), la tecnología e instrumentos empleados para la medición que tendrán que ser resueltos en el próximo concurso[10].

En investigaciones futuras también será interesante estudiar cómo se va a desarrollar la medición de las audiencias digitales televisivas tras el acuerdo de *Kantar Media* y *Comscore* para la medición de la audiencia *crossmedia*.

6. Notas

1. "El *JIC* es una organización conjunta de representantes de canales de televisión, anunciantes y compradores de medios que realiza un contrato con uno o más proveedores de datos durante un periodo de tiempo fijo (generalmente dura entre cinco y diez años). Las funciones del *JIC* generalmente incluyen la especificación del contrato, la supervisión del servicio TAM, la propiedad del copyright de los datos y la determinación de las condiciones de publicación de los datos" (*Nielsen*, 2018, traducción propia).

2. Formó parte de la mesa de contratación para el concurso de medición de audiencias digitales en España.

3. Consultora que coordinó las propuestas presentadas al concurso de medición de audiencias digitales en España.

4. Esta empresa se presentó, en asociación con otras (*The NRV Aliance*), al concurso de medición digital.

5. Formó parte de la mesa de contratación para el concurso de medición de audiencias digitales en España.

6. Datos facilitados directamente por *Comscore* a fecha de abril de 2020.

7. Datos facilitados directamente por *Comscore*.

8. En ambos casos la audiencia de vídeo se asigna a la entidad web con capacidad directa para monetizar el *stream*.

9. A los entrevistados se les garantizó el anonimato en las respuestas para evitar cualquier sesgo derivado de su categoría y vinculación profesional.

10. El 9 de diciembre de 2020 la *Comisión de Seguimiento de la Medición Digital*, formada por *Interactive Adverstising Bureau Spain* (*IAB Spain*), la *Asociación para la Investigación de Medios de Comunicación* (*AIMC*) y la *Asociación Española de Anunciantes* (*AEA*) lanzó el pliego del concurso de medición de audiencias digitales, cuyo fallo se publicará previsiblemente en el primer trimestre de 2021.

7. Referencias

Aguado-Guadalupe, Guadalupe (2017). "Repercusión de las métricas de audiencia online en la comercialización publicitaria del producto informativo". *Razón y palabra*, v. 21, n. 97, pp. 142-158.
http://www.revistarazonypalabra.com/index.php/ryp/article/view/989

AIMC (2015). *IAB Spain y AIMC anuncian los próximos pasos para la medición online en España*.
https://www.aimc.es/a1mcc0nt3nt/uploads/2015/03/150323_np_comite_seguimiento_medicion_online_iab_aimc.pdf

AIMC (2011). *IAB Spain y AIMC convocan el concurso para la adjudicación de la medición online en España*.
https://www.aimc.es/a1mc-c0nt3nt/uploads/2011/07/110701_NP_Concurso_medicion_online_IAB_AIMC.pdf

AIMC (2017a). *La comisión de seguimiento IAB/AIMC prorroga hasta 2018 el acuerdo marco firmado en su día con comScore para la medición digital*.
https://www.aimc.es/a1mcc0nt3nt/uploads/2017/03/170307_np_prorroga_acuerdo_marco_medicion_online_iab_aimc.pdf

AIMC (2017b). *IAB SPAIN, AIMC y AEA convocan el nuevo concurso para la adjudicación de la medición online en España*.
https://www.aimc.es/a1mcc0nt3nt/uploads/2017/12/171221_NP_Concursomediciononline_IAB_AIMC_aea.pdf

Barlovento (2020). *Informe consumo televisión vs. internet. Abril 2020.*
https://www.barloventocomunicacion.es/sin-categorizar/informe-consumo-television-vs-internet-abril-2020

Bermejo, Fernando (2003). "La medición de audiencias en internet". En: Igartúa, Juan-José; Badillo, Ángel (eds.). *Audiencias y medios de comunicación* (pp. 99-108). Salamanca: Universidad de Salamanca. ISBN: 8478007253

Bermejo, Fernando (2007). "Publicidad y audiencias online". En: García-Jiménez, Antonio (ed.). *Aproximaciones al periodismo digital*, pp. 273-283. Madrid: Editorial Dykynson. ISBN: 978 84 98491401

Bermejo, Fernando (2008). *The internet audience: Constitution and measurement*. New York: Peter Lang. ISBN: 978 0 820479323

Callejo-Gallego, Manuel-Javier (2019). "Investigación de audiencias: lost in transition". *Cuadernos de información y comunicación*, n. 24, pp. 155-173.
https://doi.org/10.5209/ciyc.64636

Carlón, Mario; **Scolari, Carlos** (2009). *El fin de los medios. El comienzo de un debate*. Buenos Aires: La Crujía. ISBN: 978 987 6010870

Castells, Manuel; **Fernández-Ardèvol, Mireia**; **Qiu, Jack-Linchuan**; **Sey, Araba** (2009). *Mobile communication and society: A global perspective*. Cambridge: MIT Press. ISBN: 0262033550

Cavaller, Víctor (2014). "El análisis de las audiencias de la visibilidad en el entorno digital". En: Cavaller, Víctor; Vila, Alícia; Ollé, Candela; Roca, Mercè (coords.). *Análisis de audiencias y estrategias de visibilidad*, pp. 7-33. Barcelona: UOC. ISBN 978 84 90641170

Cerezo, Pepe (2018). *Los medios líquidos: la transformación de los modelos de negocio*. Barcelona: UOC. ISBN: 9788491802013

Chen, Huey T. (2006). "A theory-driven evaluation perspective on mixed methods research". *Research in the schools*, v. 13, n. 1, pp. 75-83.
http://www.msera.org/docs/rits-v13n1-complete.pdf

Comscore (2019). *Nuevo acuerdo marco con Comscore para el período 2019-2020*.
https://www.aimc.es/a1mcc0nt3nt/uploads/2019/05/2019_05Acuerdo_marco_comscore_anexos_2019_2020.pdf

García-Orosa, Berta (2018). "Perfil de la audiencia de cibermedios: Representación discursiva y praxis del receptor 2.0". *Palabra clave*, v. 21, n. 1, pp. 111-133.
https://doi.org/10.5294/pacla.2018.21.1.6

Gutiérrez-Merelles, Borja (2019). *Analítica web en medios digitales: uso de datos de audiencia y métricas en los grandes grupos de comunicación españoles*. Tesis doctoral, Universidad Complutense de Madrid.
https://eprints.ucm.es/50735/1/T40760.pdf

Hernández-Pérez, Tony; **Rodríguez-Mateos, David** (2016). "Medición integral de las audiencias: sobre los cambios en el consumo de información y la necesidad de nuevas métricas en medios digitales". *Hipertext.net*, n. 14.
https://www.raco.cat/index.php/Hipertext/article/view/310968

Hernández-Sampieri, Roberto; **Fernández-Collado, Carlos**; **Baptista-Lucio, Pilar** (2010). *Metodología de la investigación*. México: McGraw Hill. ISBN: 978 1 456223960

Huertas, Amparo (2018). *Continuidades y rupturas en la medición de las audiencias*.
http://www.portal-comunicacion.com/lecciones_det.asp?id=104

Huertas, Amparo (2020). "Retos para la investigación del consumo cultural digital". En: Velasquez, Andrea; Renó, Denis; Estrella-Silva, Santiago (eds.). *Tendencias de la comunicación. El ecosistema mediático contemporáneo. Discusiones sobre audiencias, estrategias de Comunicación y resultados. Vol. II*, pp. 9-23. Madrid: Dykinson. ISBN: 978-84-1324-837-0.

Infoadex (2020). *Estudio InfoAdex de la Inversión Publicitaria en España 2020.*
https://www.infoadex.es/home/wp-content/uploads/2020/02/NP-Estudio-InfoAdex-de-la-Inversión-Publicitaria-en-España-2020.pdf

Lamas, Carlos (2010). "Los medios interactivos y su publicidad: la medición de audiencias". *Telos: cuadernos de comunicación e innovación*, n. 82, pp. 95-101.

Livingstone, Sonia (2019). "Audiences in an age of datafication: critical questions for media research". *Television & new media*, n. 20, p. 2, pp. 170-183.
https://doi.org/10.1177/1527476418811118

MacGregor, Phil (2007). "Tracking the online audience: Metric data start a subtle revolution". *Journalism studies*, v. 8, p. 2, pp. 280-298.
https://doi.org/10.1080/14616700601148879

Maestro-Espínola, Lidia (2015). "El debate de la medición digital: una piedra en el camino para la consolidación de la inversión publicitaria". *Pensar la publicidad,* n. 9, pp. 47-61.
https://doi.org/10.5209/rev_PEPU.2015.v9.52312

Maestro-Espínola, Lidia; **García-Santamaría, José-Vicente**; **Pérez-Serrano, María-José** (2016). "La 'prensa' digital generalista, como soporte publicitario y los cambios en su modelo de negocio". *Revista latina de comunicación social*, n. 71, pp. 1048-1068.
https://doi.org/10.4185/RLCS-2016-1134

McQuail, Denis (1994). *Introducción a la teoría de la comunicación de masas*. Barcelona: Paidós. ISBN: 9788449308123

Medina, Mercedes; **Portilla, Idoia** (2016). "Televisión multipantalla y la medición de su audiencia: el caso de las televisiones autonómicas". *Revista Icono14*, v. 14, n. 2, pp. 377-403.
https://doi.org/10.7195/ri14.v14i2.960

Mondragón-Valero, Pablo (2017). "Thick data, o por qué Netflix contrata antropólogos". *Antropología 2.0*. 28 octubre.
https://goo.gl/pSmDkK

Moreno-Cazalla, Lourdes (sin fecha). *La metodología híbrida para el análisis las audiencias mediáticas en Internet en España: el caso Comscore*.
https://www.academia.edu/38473746/An%C3%A1lisis_de_la_metodolog%C3%ADa_comScore_con_respecto_a_las_audiencias_medi%C3%A1ticas_en_Internet.pdf

Mutter, Alan (2011). "Engagement: the new digital metric". *Reflections of a newsosaur*, 13 octubre.
https://goo.gl/k9GGZG

Mytton, Graham; **Diem, Peter**; **Van-Dam, Piet-Hein** (2016). *Media Audience Research: A Guide for Professionals*. New Delhi: SAGE Publications India. ISBN: 9351506436

Nielsen (2018). *Glossary*.
https://www.nielsentam.tv/glossary2/glossaryquery.asp

Nielsen (2020). *Nielsen launches next gen methodology for its flagship digital measurement products*.
https://bit.ly/3nzurMV

Papí-Gálvez, Natalia (2014). "Los medios online y la ¿crisis? de la planificación de medios publicitarios". *Adcomunica,* n. 7, pp. 29-48.
https://dx.doi.org/10.6035/2174-0992.2014.7.3

Papí-Gálvez, Natalia (2017). *Investigación y planificación de medios publicitarios*. Madrid: Síntesis. ISBN: 9788491710844

Papí-Gálvez, Natalia; **Perlado-Lamo-de-Espinosa, Marta** (2018). "Investigación de audiencias en las sociedades digitales: su medición desde la publicidad". *El profesional de la información*, v. 27, n. 2, pp. 383-393.
https://doi.org/10.3145/epi.2018.mar.17

Portilla-Manjón, Idoia (2009). "Técnicas de investigación online: aportaciones de los estudios de medición de audiencias de Internet". *Metodología de Encuestas*, v. 11, n.1, pp. 47-77.

Rius, Mayte (2017). "El poder del thick data en la era del big data". *La vanguardia*, 10 junio.
https://goo.gl/47w9ud

Rodríguez-Vázquez, Ana Isabel; **Direito-Rebollal, Sabela**; **Silva-Rodríguez, Alba** (2018). "Audiencias crossmedia: nuevas métricas y perfiles profesionales en los medios españoles". *El profesional de la información*, v. 27, n. 4, pp. 793-800.
https://doi.org/10.3145/epi.2018.jul.08

Solanas, Olga; **Carreras, Gloria** (2011). "Nuevos medios publicitarios: la influencia del mundo digital en la planificación de medios". *Trípodos*, n. 28, pp. 63-81.

Van-Es, Karin (2019). "YouTube's operational logic: "the view" as pervasive category". *Television & new media*, v. 21, n. 3, pp. 223-239.
https://doi.org/10.1177/1527476418818986

8. Anexo

<table>
<tr><td>Población</td><td colspan="3">Personas de 4 años en adelante, residentes en España y con acceso a internet al menos en el último mes.</td></tr>
<tr><td rowspan="3">Tipo de uso</td><td rowspan="2">Origen del consumo</td><td>Entidad propia</td><td>Ordenador de sobremesa/portátil.
Tableta.
Móvil; smartphone.
Televisión conectada (incluye smart TV, HBBTV, etc.)</td></tr>
<tr><td>Otros</td><td>Acceso en dispositivos móviles: diferenciando entre navegación in browsers e in-apps.
Sistema operativo: la medición digital deberá ser posible independientemente del sistema operativo origen del consumo sea cual sea el dispositivo.
Navegador: la medición digital deberá ser posible independientemente del navegador utilizado para el consumo de internet.</td></tr>
<tr><td>Lugar de consumo</td><td colspan="2">Comunidad autónoma.
Hogar.
Lugar de trabajo.
En movilidad.</td></tr>
<tr><td rowspan="12">Aspectos cuantificables</td><td>Métricas de audiencia</td><td colspan="2">Usuarios únicos / Cobertura.
Tiempo de consumo.
Páginas vistas.
Procedencia del tráfico.
Tráfico distribuido, todo aquel tráfico fuera del ámbito de la brand del site principal.
Visitas y promedio de usuarios únicos diarios.</td></tr>
<tr><td rowspan="4">Métricas de audio</td><td colspan="2">Espectadores/usuarios únicos.
Sesiones.
Reproducciones de audio (audio plays).
Minutos consumidos.
Tiempo medio de reproducción.
Porcentaje medio de reproducción.</td></tr>
<tr><td colspan="2">Por tipo de consumo:
Emisión en directo (live).
Consumo bajo demanda (AOD, audio on demand).</td></tr>
<tr><td colspan="2">Por tipo de plataforma:
Consumo desde el site o el player de cada entidad.
Consumo distribuido en plataformas de terceros (por ejemplo: iVoox, iTunes, TuneIn...) (deseable).</td></tr>
<tr><td colspan="2">Contenido versus publicidad.
Diferenciación entre audio de contenido y audio publicitario.</td></tr>
<tr><td rowspan="5">Métricas de vídeo de consumo</td><td colspan="2">Sesiones:
Total views.
Unique viewers.
Minutos de visionado por visita (viewer).
Minutos de visionado por usuario (usuario-viewer).
Porcentaje medio de visualización.
Incluir en los datos vídeos distribuidos (embebidos en otros dominios).</td></tr>
<tr><td colspan="2">Tipo de contenido:
Emisión en directo (live stream).
Consumo bajo demanda. Se valorará que el ofertante sea capaz de medir de forma diferenciada entre las diferentes modalidades de vídeo bajo demanda (VoD, Catch up, etc.).</td></tr>
<tr><td colspan="2">Vídeo distribuido en plataformas de terceros:
Vídeo distribuido en plataformas como YouTube, Facebook, DailyMotion (web, apps, etc.), etc.(deseable).
Aplican las mismas métricas básicas.</td></tr>
<tr><td colspan="2">Contenidos versus publicidad:
Diferenciación entre vídeo de contenido y vídeo publicitario.</td></tr>
<tr><td colspan="2">Las métricas de audiencia enunciadas deberán ser facilitadas para los tipos de contenido en adelante expuestos, en aquellos casos donde sea procedente:
- Site, llegando a la máxima desagregación posible (site/canal/sección).
- Red, llegando a la máxima desagregación posible (red/canal/site).
- Aplicaciones.
- Contenido publicitario, en especial la medición de la viewability siguiendo las pautas de estándares y buenas prácticas de Ad viewability 2017.
Se valorará positivamente la posibilidad de obtener métricas de audiencia de los siguientes tipos de contenidos:
- Apps más allá de las metodologías de SDK.
- Newsletters / emails (deseable)
- Advergaming (deseable)
- RSS feeds (deseable)
- Widgets (deseable)
En todos ellos se valorará la aportación de información con criterios sociodemográficos.</td></tr>
<tr><td>Otras consideraciones</td><td colspan="2">Utilización de players de vídeo de terceros en los dominios de un publisher:
- El medidor expondrá cómo llevará a cabo la medición de players de terceros (YouTube Player for Publishers, etc.) cuando se encuentren en los dominios de un publisher.
- Nuevas plataformas de contenido audiovisual. Dada su creciente relevancia también será valorable que el medidor indique las posibilidades de abordar la medición de las nuevas plataformas de contenido audiovisual bajo suscripción, como Netflix, HBO, etc.</td></tr>
</table>

Explotación de datos	Explotación temporal de los datos	- Los aspectos cuantificables obligatoriamente deberán de ser medidos de forma continuada, ofreciendo datos mensuales. Además, el medidor deberá mostrar su capacidad para ofrecer el dato diario. Para ello tendrá que detallar la metodología que empleará y las funciones que aportará, así como la forma de su implementación en las herramientas, y su coste desglosado. - Se valorará la desagregación máxima de los datos de la medición correspondiente a la unidad temporal "hora". - También se solicita que la herramienta sea flexible para poder hacer análisis horarios, diarios, semanales, quincenales, mensuales, trimestrales, etc., según las necesidades del usuario.
	Categorización	- El medidor hará explícitas las reglas taxativas de categorización que deberán ser objetivables vía tráfico y de igual aplicación para todos los *sites*. Además, es preciso que cualquier cálculo o normativa que se aplique de forma obligatoria, sea realizada sobre el dato multiplataforma. - La categorización se realizará en función del porcentaje de tráfico multiplataforma mayoritario a nivel URL con relación a esa categoría. Se mantendrá el horizonte temporal de 3 meses para analizar el tráfico y en consecuencia el cambio de categoría. - La categorización tiene que adaptarse a las necesidades locales. Para ello el medidor se comprometerá a que exista un equipo local con capacidad de decisión a la hora de categorizar. En el caso de que el medidor seleccionado no lo cumpliera, se comprometerá a solventarlo en un espacio de tiempo delimitado. - Se solicita al medidor que en lo relativo a las redes se siga el mismo criterio que para los medios y que existan dos categorías: una para las diferentes redes y otra con el dato agregado por categoría de canal. - Del mismo modo, se podrá solicitar una categorización propia en plataformas de terceros en función de los contenidos creados, independientemente de la categorización genérica de la plataforma. La categorización en los canales de terceros seguirá los criterios generales aplicables a los medios y las redes. - También se solicita la creación de una categoría propia para revistas. La normativa de cesión de tráfico debe de ser clara. Se explicitará el control que hacen de los contenidos pirateados, los mecanismos para detectarlos y cómo se imputan sus consumos.
	Etiquetado	- Se solicita que la medición sea única para todos bajo el mismo tag, que será proporcionado por el medidor para todo tipo de soportes o agregadores de los mismos (web, aplicaciones nativas e híbridas, medición publicitaria, etc.), TV conectadas, así como SDK de compatibilidad anual. De cara al correcto funcionamiento y control del etiquetado las empresas candidatas indicarán las herramientas de seguimiento de cara a verificar el etiquetado. - El medidor se comprometerá a dar soporte técnico local que agilice las consultas. Se solicita que la documentación técnica de implementación de los tags sea lo más completa posible, además de accesible para cualquier cliente actual o potencial que lo solicite. - Se solicita que la información censal sirva de apoyo para realizar una comparativa real entre soportes. Además, que permita el cálculo de métricas relevantes, consumo de páginas vistas reales, tiempo de consumo, visualizaciones de vídeo, etc. - Los candidatos deberán aportar posibles soluciones para etiquetar los diferentes formatos de audio y vídeo tanto en plataformas propias como en las de terceros (*YouTube*, *Spotify*, *Facebook*), así como los estándares de distribución móvil actuales (*AMP* y *Facebook Instant Articles*) y futuros. - Se valorarán positivamente las propuestas que ofrezcan la ejecución de un tag síncrono, asegurando en cualquier caso que será compatible con los tags asíncrono.
Medición publicitaria	- Publicidad pre-evaluación campaña - Publicidad post-evaluación campaña cobertura, contactos, frecuencia, distribución de contactos, *GRP*, cobertura total, cobertura in target, cobertura exclusiva por soporte, duplicación audiencia por soporte, frecuencia, impactos por dispositivo, *GRP* (cobertura multi-dispositivo, sobre impresión y sobre visionado). Además, se valorará que el medidor indique cómo los va a medir y los costes que implican las siguientes métricas adicionales: -*Viewability*, siguiendo las Guidelines de estándares y buenas prácticas de *Ad Viewability 2017*. - Geográfico (impresiones que se han lanzado solo en la zona geográfica planificada). - *Brand safety*. - Tráfico no válido. - Se valorará positivamente cuanto mayor sea la simplicidad del proceso del etiquetado de campaña. - Así mismo, el medidor deberá de indicar las vías en que está trabajando para poder incluir los datos de cobertura de las diferentes plataformas (*YouTube*, *Facebook*, *Spotify*, etc.), así como su capacidad de colaboración con partners para la mejora de la medición *in app*. Del mismo modo tendrá que exponer su política de precios a este respecto.	

Especificaciones técnicas	Panel de medición	Información sobre la captación	Se valorará positivamente el reclutamiento personalizado. Se deberá detallar el procedimiento de captación (personal, telefónico, online...). En el caso de que se lleve a cabo captación telefónica será preciso la representación de los hogares sólo móviles.
		Información sobre la gestión	- Tiempo máximo de permanencia del panelista - Procedimientos de rotación. - Procedimientos de control y supervisión. - Políticas de fidelización. - Protocolo de admisión de los panelistas. - Tiempo mínimo antes de arrojar el dato: se considera un valor orientativo del tiempo mínimo un mes, medido desde la incorporación del panelista al panel hasta que se arroje el dato. - Tamaño mínimo de la muestra: se deberá indicar el número mínimo de elementos de la muestra necesarios para arrojar un dato. La herramienta no debe proporcionar datos en aquellas unidades de análisis con representatividad de individuos inferior a la deseada. - Identificación del individuo del hogar y discriminación frente a otros usuarios del dispositivo en que está instalado el software de medición.
		Otros usos del panel	Se valorará que el medidor indique qué otras capas de datos pueden aportar para enriquecer los datos sociodemográficos del panel, en especial de cara a mejorar la capilaridad en mobile y en segmentos concretos como el de menores de 18 años. A su vez, se considera recomendable aportar información sobre la implantación de las siguientes características: - Medición de tráfico en movilidad, lugar de consumo y de otros dispositivos y aplicaciones: se solicita a los ofertantes la descripción de soluciones tecnológicas que permitan la correcta representación del uso de internet en movilidad y/o mediante dispositivos y aplicaciones diferentes del ordenador de sobremesa del hogar. En especial, es de interés el detalle del cálculo referido a las duplicaciones de usuarios. - Posibilidad de representación muestral a nivel provincial, con explotación acumulada en función de la base muestral. Definición de posibles alternativas para la ponderación de datos de provincias y coste asociado a su implementación global o en respuesta a peticiones concretas. - Posibilidad de representación muestral en función de las distintas plataformas y dispositivos de conexión a Internet. - Se pide que se aporten soluciones técnicas para la mejor representación de los estilos de vida de los panelistas e intensidad y tipología de uso de internet. - El panel dispondrá de un número mínimo de 25.000 panelistas. El medidor deberá proponer la desagregación entre dispositivos que considere más oportuna. La desagregación acordada tendrá carácter obligatorio y su incumplimiento podrá llevar a la rescisión de contrato. - Se solicita a los candidatos que presenten la propuesta con el tamaño y estructura de muestra que ellos aconsejen de acuerdo a las especificaciones técnicas establecidas. - La estructura muestral deberá indicar la composición de los distintos colectivos que comprende en relación a hogar / trabajo / movilidad. - El panel deberá de ser representativo para las variables sociodemográficas seleccionadas, cinco obligatorias, y una sexta valorable, tanto para móvil como para PC, y siempre con relación al referencial del *EGM*. Las variables para el equilibraje deberán ser: Obligatorias: Sexo. Edad. CC.AA. Índice socioeconómico. Presencia de niños en el hogar Valorables: Tamaño de hogar. - Por la propia evolución del mercado se tendrán que tener en cuenta desviaciones superiores al 10% para realizar las modificaciones oportunas en la representación muestral del panel total. - Si el panel total tiene una estructura interna distinta en función de los métodos de reclutamiento, se deberá explicitar dicha estructura y desagregar los costes de los distintos subpaneles que conforman la muestra total. En resumen, se solicita una descripción en profundidad de la muestra y la gestión de la misma. La propuesta deberá incorporar, al menos, los siguientes puntos: - El marco de la muestra: universo y sujeto de la medición. - El método de muestreo. - Selección de los panelistas y procedimientos llevados a cabo. - Ponderación y muestra efectiva. - Productividad del panel y tasa de actividad asociada. - Gestión de la rotación de los panelistas. - Gestión del panel y seguridad. - Protocolo de confidencialidad de los panelistas. - Comunicación con los panelistas. - Procesos para una ponderación diaria del panel. - Procesos de mantenimiento y mejora de la gestión del panel y su calidad. - Variables de conformación del panel. - Variables de control: las variables relevantes en el seguimiento de la muestra de cara a la representación de ciertos equipamientos que inciden en el consumo (posesión de distintos dispositivos de conexión a internet). - Variables de equilibraje. Se valorarán los requerimientos de mejora del panel que el medidor proponga y que deberán ser supervisados por el Comité de clientes. Se tendrá en cuenta tanto una muestra panel de nueva creación como una ya existente. En este sentido, se solicita a los ofertantes la definición de un calendario de implantación paulatina de los requerimientos técnicos que tengan previsto efectuar. Con relación al fenómeno del *adblocking*, se solicita al medidor que explique su postura al respecto, detallando la política que sigue para evitar posibles repercusiones en la correcta representación del universo de medición. Así mismo el medidor indicará las posibles implicaciones que pueda tener y su plan de actuación ante la inminente puesta en marcha de la *General Data Protection Regulation* (*GDPR*).

Especificaciones técnicas	Medición censal	El presente concurso comprende exclusivamente la medición de audiencias digitales y por tanto no se incluyen en el mismo las especificaciones técnicas de la analítica web. Sin embargo, el ofertante deberá incluir en su oferta el sistema de medición censal puesto que es necesario para el cálculo de la medición final de audiencias digitales a través del Factor de humanización multidispositivo (FHM). El ofertante podrá incluir en su propuesta su propia herramienta o servicio de analítica digital.
	Factor de humanización	El objetivo perseguido es conseguir una única medición que pueda ser utilizada en la evaluación de audiencias y la contratación de campañas publicitarias digitales. En cualquier caso se trata de la medición de individuos quedando fuera el tráfico no válido.
	Metodología de cálculo	Los ofertantes deberán suministrar información detallada que explique: - Máxima transparencia respecto a la metodología para establecer el Factor de humanización multidispositivo (FHM). - En caso de discrepancias se pondrán los datos requeridos, incluyendo el FHM, a disposición del cliente y del auditor. Se valorará que el medidor ofrezca este dato mensualmente a los soportes.

Fuente: *Comscore*

New audience dimensions in streaming platforms: the second life of *Money heist* on *Netflix* as a case study

Elena Neira; Judith Clares-Gavilán; Jordi Sánchez-Navarro

Nota: Este artículo se puede leer en español en:
http://www.profesionaldelainformacion.com/contenidos/2021/ene/neira-clares-sanchez_es.pdf

How to cite this article:

Neira, Elena; **Clares-Gavilán, Judith**; **Sánchez-Navarro, Jordi** (2021). "New audience dimensions in streaming platforms: the second life of *Money heist* on *Netflix* as a case study". *Profesional de la información*, v. 30, n. 1, e300113.

https://doi.org/10.3145/epi.2021.ene.13

Manuscript received on May 27th 2020
Accepted on September 23rd 2020

Elena Neira ✉
https://orcid.org/0000-0002-8565-2889

Universitat Oberta de Catalunya
Estudios de Ciencias de la Información y de la Comunicación
Av. Tibidabo, 39-43
08035 Barcelona, Spain
elena@laotrapantalla.com

Judith Clares-Gavilán
https://orcid.org/0000-0002-7462-9712

Universitat Oberta de Catalunya
Estudios de Ciencias de la Información y de la Comunicación
Av. Tibidabo, 39-43
08035 Barcelona, Spain
jclares@uoc.edu

Jordi Sánchez-Navarro
https://orcid.org/0000-0002-0311-1385

Universitat Oberta de Catalunya
Estudios de Ciencias de la Información y de la Comunicación
Av. Tibidabo, 39-43
08035 Barcelona, Spain
jsancheznav@uoc.edu

Abstract

The growth in popularity of on-demand content consumption, boosted by large global agents such as *Netflix*, *Amazon* and *HBO*, has brought audience fragmentation even further. Exponential growth in the content available to users (which reduces viewer concentration based on a limited selection), its commercialisation through a subscription-based business model (removing advertising from content) and the boom in consumption on different receivers, many of them mobile or outside the home (thus complicating people meter monitoring), has generated a new ecosystem where success can no longer be assessed using traditional audience measurement systems. This article discusses audience behaviour in streaming platforms and the new dimensions used to measure the success of a television series, above and beyond data provided by television audience measurement (TAM) techniques. From this analysis, the article reviews the transformation in the concept of popularity and how new audience indicators affect the structure of the content distribution medium, which adds further dimensions (engagement, customer retention, talent acquisition, new subscriptions and branding, among others) to more traditional elements (advertisers and international sales). Finally, we examine whether a single concept of audience, valid for all consumption models and audiovisual operations, can be established. *Money heist* is used as a case study, as it provides a good example of two ways of understanding audience: one linked to its commercial success in the *Antena 3 Televisión* channel's scheduled programming and the other arising from its inclusion on *Netflix*, the platform that gave it worldwide popularity.

Keywords

Audiences; *Netflix*; *Antena 3*; Popularity; *Money heist*; Success; Big data; Demand expressions; Audience measurement; Rating; Share; TAM; SVOD; VOD; OTT; On demand.

1. Introduction

Good knowledge of the target public for an economic activity is an essential aspect for all businesses. Without knowledge of audiences, users or customers, it would be impossible to satisfy their demands, forge a good market position or develop profitable services (**Portilla**; **Vara-Miguel**; **Díaz-Espina**, 2016). This media interest in audience is an important aspect in the logic of commercial television, which for a long time has operated with a simple dynamic: making content profitable based on the number of viewers it is able to attract (**Clares-Gavilán**; **Merino-Álvarez**; **Neira**, 2019). If audience has been the main financial motor for television, then advertising has been its main nourishment (**Vacas**, 2012).

Audience research is essential for obtaining information on the public's behavioural habits, likes, preferences and needs (**Iglesias**, 1985). Furthermore, audience measurement is a key element for diagnosis, forecast and planning (with the aim of quantifying reception for content within programming schedules, forecasting potential audience for similar programmes and deciding whether they should be kept in the schedules). In the commercial channel ecosystem, techniques for television audience measurement (hereinafter referred to as TAM) have on the whole become rating tools, as the value of a time band is based on viewer numbers concentrated around the broadcast (**De-Durán**, 2014). This commercial interest, which considers audience attention as goods (**McQuail**, 1992), establishes a direct relationship between channel and advertiser, in which viewers are the currency whereby the price of advertising space is calculated.

As Jauset explains,

> "it is essential to know audience levels for each space or programme on a television channel, as they have a direct impact on the main source of income, i.e. selling spaces or time bands, whose price varies with the audience level" (**Jauset**, 2014).

The first decade of the 21st century saw the development of a new audiovisual system, in which the Internet played a central role (**Corbella**, 2010). From the start, television via this new broadcasting technology was seen as the driver for future growth in the audiovisual market, although it has eroded classic, mainly advertising-based business (**Arrojo**, 2010; Álvarez-Monzoncillo, 2011). This digital transition brought with it new complexities, especially in terms of audiences, which professionals in the sector now consider to have reached a low point, as they are considered insufficient for the emerging communicative environment (**González-Neira**; **Quintas-Froufe**; **Gallardo-Camacho**, 2020). According to recent research, two of the biggest challenges facing TAMs are, firstly, the problem of approaching audiences that are elusive and invisible with regard to the screen docking system and, secondly, the rapid obsolescence of strategic innovations due to the speed of progress in digital culture (**García-Santamaría**; **Barranquero-Carretero**; **Rosique-Cedillo**, 2017; **Huertas**, 2018; **Núñez-Ladevéze**; **Torrecillas-Lacave**; **Irisarri-Núñez**, 2019).

The growth in popularity of streaming and on-demand content consumption, boosted by large global agents such as *Netflix*, *Amazon* and *HBO*, has produced significant disruption in consumption habits and further heightened the phenomenon of audience fragmentation, marking the switch from *paleotelevision* to *neotelevision* (**Vacas**, 2012). As well as these new operators, the appearance of new packages and types of data has had a significant impact on companies operating in the context of TAMs (**Portilla**, 2015; **Callejo-Gallego**, 2019). Exponential growth in content available to users (reducing viewer concentration on a limited selection), its commercialisation through a subscription-based business model (removing advertising value from the content) and the boom in consumption outside broadcasting times on different receivers, many of them mobile or outside the home (thus complicating monitoring with people meters) has generated a new ecosystem where success can no longer be assessed exclusively using traditional audience measurement systems. Media audiences are now defined as *atawad*, an acronym of 'any time', 'anywhere' and 'any device'. Indeed, the term has been extended to *atawad+ac*, adding 'any content' to the formula, **Hernández-Pérez**; **Rodríguez-Mateos**, 2016). The consolidation of this new type of viewer has disrupted analogue model-based business (**Álvarez-Monzoncillo**, 2011). It has also laid bare the need to rethink the utility and quality of measurements, even generating a specialist field of measurement studies (**Huertas**, 2018).

What we term audience is today a reality made up of vast amounts of data characterised mainly by its fragmentation. Data is taken from a wide range of sources and its relationship with real consumption is not always clear, leading to multiple interpretations (**Hernández-Pérez**; **Rodríguez-Mateos**, 2016). This environment of global, decentralised, on-demand viewing has also brought about a redefinition of the concept of popularity. In the context of streaming in the subscription video-on-demand (SVOD) model, where the release of audience figures is not standard practice, how can one know if a programme is a success? This situation is particularly striking in the case of platforms' leading series, or *tentpoles* (**Neira**, 2020), which are the main hook for attracting new customers. Such programmes can provide the focus for a large volume of different interest expressions (social conversation, Internet searches, shared content and illegal downloads, among others) that express a desire for, or interest in, consumption, thereby demonstrating the powerful impact of the content, feeding users' interest in being (or continuing to be) a platform customer. These *demand expressions* (using the term coined by *Parrot Analytics*), which circulate outside the TAMs, take on special relevance in the SVOD business model, which limits the audience's value

> Today, audience is a reality consisting of vast amounts of data characterised mainly by its fragmentation; thus its relation to real consumption is not always clear

as goods for the advertising industry while raising its value as platform customers (**McQuail**, 1992; **Álvarez-Monzoncillo**, 2011; **De-Durán**, 2014).

Money heist (original title: *La casa de papel*) provides an appropriate case study to assess the concept of programme success and popularity, as it allows us to analyse its performance on two different distribution channels: a national commercial television channel (*Antena 3*) and a global streaming platform (*Netflix*). Since its inclusion in the *Netflix* catalogue, *Money heist* has frequently been described as a phenomenon. However, this phenomenon is unquantifiable as there is no audited audience data for the series on the platform.

2. Objectives and methodology

The main objective of this article is to progress toward a new concept of audience in the context of on-demand video consumption in the subscription model (taking *Netflix* as a reference, given its market importance) and reflect on whether a single concept of audience can be applied to all on-demand audiovisual consumption and business models. To do this, the following research questions (RQ) are posed:

RQ1: How do audiences on streaming platforms behave? By extension, this question involves examining how audience is quantified and/or weighted and whether, in this context, we can continue to consider audience as goods.

RQ2: What aspects should a new, revised concept of audience consider in the context of SVOD? What new audience dimensions does the concept of video consumption on streaming platforms introduce?

RQ3: Do new audience dimensions require a new concept of popularity?

RQ4: Can a single concept of audience be applied to all on-demand audiovisual consumption and business models?

The series *Money Height,* created by Àlex Pina, provides an appropriate case study for assessing the concept of programme popularity in relation to two different distribution channels:

- a national commercial television channel (the series was first scheduled on *Antena 3*, with relative success) and
- a global streaming platform (where it became the most-viewed fiction series in Spanish in the platform's history).

As no audience figures are available, evidence for this success is based on company statements (unaudited) and its viral behaviour, boosted by a new digital audience, which seeded interest in the programme, attracting new mass audiences and customers to the service, seduced by its impact.

To answer these research questions and thus achieve the objective of this article, we will analyse the following issues:

-the crises of the TAMs;
- new television measurement formulas;
- new forms of measurement incorporated into online video platforms;
- new audience dimensions; the new concept of success and popularity;
- audience behaviours in the context of streaming platforms;
- the way *Netflix* conceptualises and measures the audience for their programmes;
- the specific analysis of the commercial life of *Money heist.*

This study takes as its framework the academic and professional research on audiovisual visual distribution in the online environment in general and on *Netflix* in particular (**Keating**, 2012; **Tryon**, 2013; **Cunningham**; **Silver**, 2013; **Holt**; **Sanson**, 2013; **Curtin**; **Holt**; **Sanson**, 2014; **Lotz**, 2014; 2018; **Landau**, 2016; **Lobato**, 2019). It also uses on audience research, in particular that which focuses on basic aspects such as methodology, development and purpose within the media ecosystem (**Iglesias**, 1985; **McQuail**, 1992; **Huertas**, 2002; **Morley**, 2003; **Gillespie**, 2005; **Napoli**, 2008; **Jauset**, 2014; **Castillo-Izquierdo**, 2016).

A wide-ranging review of the literature on other aspects, such as the impact of digitalisation on the audiovisual market in terms of cultural homogenisation and defending diversity (**Clares-Gavilán**, 2014; **Albornoz**; **Leiva**, 2017; **Clares-Gavilán**; **Medina-Cambrón**, 2018) and the transformation of viewing habits, was also conducted. The latter field has led to new lines of research that propose new approaches to audience measurement, such as those focussing on:

- online-offline convergence (**Callejo-Gallego**, 2002; **Webster**, 2014; **Portilla**, 2015; **Rodríguez-Mateos**; **Hernández-Pérez**, 2015);
- the social audience (**Gallego**, 2013; **Quintas-Froufe**; **González-Neira**, 2016; **Halpern**; **Quintas-Froufe**; **Fernández-Medina**, 2016; **Núñez-Ladevéze**; **Torrecillas-Lacave**; **Irisarri-Núñez**, 2019; **Masip**; **Ruiz-Caballero**; **Suau**, 2019; **Vázquez-Herrero**; **González-Neira**; **Quintas-Froufe**, 2019; **González-Neira**; **Quintas-Froufe**, 2020);
- big data (**Fernández-Manzano**; **Neira**; **Clares-Gavilán**, 2016; **Napoli**, 2016; **Smith**; **Telang**, 2016).

We consider the case study (**Yin**, 2009) to be the most appropriate methodology to use here, as this is an empirical analysis with numerous knowledge sources for researching a modern phenomenon. Hence, we use primary and secondary sources related to our field of analysis (programme audience and popularity): literature review, data provided by the audience measurement company in Spain, statements from *Netflix* employees (in professional forums that provide public records), data released by *Netflix* (from its press office, on its *Netflix* Research website and in letters to shareholders attached to quarterly financial statements) (*Netflix Investors*, 2018; 2020a; 2020b), and analyses in the trade press.

The methodological analysis is complemented by three in-depth interviews. The *Atresmedia Televisión* director of digital content and social media, Francisco Sierra Hernando, and the former director of product design and business development for *Atresmedia Digital*, Jesús Moreno, helped provide an idea of the digital popularity of *Money heist* before its inclusion in the *Netflix* catalogue and the impact of the series' success on the *Antena 3* brand. Also interviewed for this article were Alejandro J. Rojas, director of applied analytics at *Parrot Analytics*, the company that has developed its own analysis system for researching popularity in digital content distribution environments. *Parrot Analytics* provided ad hoc information for this study, which helped follow the changes in *Money heist*'s popularity after its inclusion in the *Netflix* catalogue.

3. The crises of the TAMs

As a means of promoting market transparency, television channels agreed to undergo a single, external, independent audit to measure audience figures for their scheduled programming and their share of total television consumption. The aim was to ensure users of these audience figures (the television and advertising industries) did not receive contradictory data when signing sales agreements. They all accepted the survey methodology with regard to sample selection, data collection and the final indicators (**Huertas**, 2002).

The current TAM system, which in Spain follows the tradition of a single study per country (**Huertas**, 2006), is based on data provided by a people meter, a device installed in the homes of a representative sample of the Spanish population (residents aged over 4 in first and second homes with a television set), which counts each person, identified by remote control, as a member of the audience after detecting them watching a programme for several consecutive seconds. In Spain, the reference unit is the minute, i.e. the programme or channel selected for the most seconds in a given minute is considered to have received the audience. Given that the audience varies from minute to minute, the mean audience indicator is used when referring to a programme's audience, i.e.

> "the number of individuals who maintain contact with the televised medium over a period of time, bearing in mind the duration and counting repetitions in each minute" (**Jauset**, 2014).

Thus the audience is calculated by adding up the total audience for each programme minute and dividing the resulting figure by the number of minutes the programme lasts.

Although the people meter technique is far from perfect, it has provided stability to the industry for some years. It is ideal in a context of controlled supply where the type of consumption is relatively uniform, as it was when watching television was the main leisure activity in Spanish homes.

Since 1993, when the merger of *Ecotel* and *Media Control* gave rise to *Sofres Audiencia de Medios* (who introduced the current TAMs), viewers' habits, on which each channel's audience rating and share are constructed, have changed considerably. This complexity in the audiovisual market is the result of the digital transition. Along with steady audience fragmentation and the rise in converging processes, there has been a growth in pay television and economic threats from new forms of Internet consumption (**García-Santamaría**; **Barranquero-Carretero**; **Rosique-Cedillo**, 2017). The vast range of viewing combinations has raised numerous questions (**Hernández-Pérez**; **Rodríguez-Mateos**, 2016). Thus new types of audience have arisen.

According to the analysis contained in *Análisis televisivo 2019* by the consultancy firm *Barlovento Comunicación*, in that year average daily television consumption was 222 minutes per person per day in a 'consumption universe' of 45,071,000 people in Spain aged 4 or over, 12 minutes less than in 2018. These 222 minutes per person per day can be broken down into three categories for classifying television viewing:

- linear (206 minutes);
- delayed (watching a programme up to seven days after its original broadcast); and
- invited (people not included in the panel but who have been added to it at some time).

The concept of delayed audience (watching television content after its original broadcast) has brought about rapid and unprecedented sociological change, highlighting one of the weaknesses in TAMs. With the proliferation of leisure options, individuals' attention is no longer as focused as before and is spread over an increasingly broad offer. Not only do we watch less television (one has to go back to the 1990s for figures similar to 2019), but we also watch conventional television differently. Habits among television viewers, especially younger viewers, are being infected by these new forms of on-demand and destructured consumption, as shown by increasing use of à la carte television services to the detriment of scheduled broadcasts. Equally relevant is the phenomenon of social television, the result of adding social media to the television experience, resulting in an online space that increases interactivity in shared programming (**Halpern**; **Quintas-Froufe**; **Fernández-Medina**, 2016). Constant demands to consider the social audience as a complement to linear audience data is justified by its consolidation, thanks to acceptance by the public and its increasing use by television channels (**Quintas-Froufe**; **González-Neira**, 2016).

The disruption to standardised consumption, the basis for traditional TAMs, is based on a new configuration in responses and attitudes among audiences (**Roncallo-Dow**, 2016), who now see choosing how, where, and when to watch as an inalienable right (**Neira**, 2015). An empowered audience such as this introduces a number of subjective variables in the context of new relationships established between a less passive viewer and the so-called new media. The larger offer (which has lowered the figures for audiences concentrated on a small number of programmes), its operating model (subscription without advertising) and the rise in signal reception devices, leading to increased mobile viewing (beyond the range of people meter monitoring), have produced a new model that combines infinite consumption that is difficult to parameterise. As **Callejo-Gallego** (2019) notes, what we are seeing is an audience that has not yet been produced by measuring instruments or which still lacks the instruments for its comprehensive measurement.

We now no longer talk only about cultural and commercial television. The business side of the new television, provided directly to consumers and based on monthly subscriptions (SVOD), is transformed: viewers have become customers of a personalised offer. As predicted by Huertas,

> "although it has become normal since the end of the 20th century to treat the audience as customers or users, in the future this term will become ever more widespread. Whereas traditional television spoke with a single message directed to the crowd (citizens or consumers), who did not share the same space, television of the future is shaping up to be in the form of service or experience distribution companies aimed at meeting individuals' (customers') needs" (**Huertas**, 2002).

Consumption of streaming content adds new dimensions not only to the traditional audience concept but also to the concept of programme success. Given that viewing concentrated on a specific space and time is no longer the default option and multi-speed consumption has become the new normal, the need arises to develop different indicators of programme success, as discussed below.

4. New formulas for television measurement

Technological changes have transformed production, diffusion and consumption practices, making this a crucial moment in audience research (**Cascajosa-Virino**, 2016). Consequently, traditional television is experiencing hard times. As TAMs are based on concentration and market share and calculated using people meters, their blind spots have been highlighted by the growing number of operators in the audiovisual entertainment sector. The emerging streaming culture has had a clear impact on traditional media, most noticeably the drop in linear viewing numbers. Public and private channels responded to this phenomenon with à la carte television services, in which programmes can be watched after their original broadcast times and on devices other than the television set. They decided to offer this alternative, which more closely matched the new forms of audiovisual consumption, to adapt to these new consumption habits. And they did so knowing what the collateral effect would be: loss of linear television audiences to on-demand services, which are more convenient for users but much less profitable, in terms of advertising, for television channels. The delayed and disseminated audience has been included in *Kantar Media* measurements to provide a more complete picture of current consumption, which clearly shows there is no longer a single audience, but many different ones, on different media and with very different consumption times (**Rodríguez-Mateos**; **Hernández-Pérez**, 2015). The solution involves broadening data collection with guaranteed (i.e. audited), hybrid, cross-media systems (**Portilla**; **Vara-Miguel**; **Díaz-Espina**, 2016; **Huertas**, 2018).

European practice is described in the study by **Papí-Gálvez** and **Perlado-Lamo-de-Espinosa** (2018) on audience research in digital societies, based on an analysis of 23 countries. In Europe the techniques of

- *audiomatching*: the people meter takes video and/or audio samples from the channels being watched or listened to by the panel member and compares them to the original broadcast signal;
- *fingerprinting*: the device extracts the audio 'digital fingerprint' captured from the television broadcast and compares it to a centralised fingerprint database.

These techniques recognise the audio or video being viewed (either live or delayed) and associate it with the corresponding programme. The range established to define the delayed audience (i.e. number of days after the initial broadcast to consider it as having been viewed) is the *vosdal* (viewing on same day as live), which may be extended to the following seven days (+7). *Kantar Media* has adopted this model, terming it *time shift*. As **Gallardo-Camacho**, **Sierra-Sánchez** and **Lavín** (2019) explain, people meters count the non-linear audience on the same day of broadcast up to 2:30 am (*vosdal*) and on the next seven days (+1, +2, +3, +4, +5, +6 and +7). The delayed audience is also counted in two sites at once:

- in the delayed audience in viewing time (DAV) and
- in the delayed audience in broadcast time (DAB).

DAV refers to the exact time delayed content is consumed and DAB is added to the delayed audience for the original broadcast programme.

Thus, the new system enables previously broadcast content to be viewed up to seven days later and included in published audience figures, as long as the programme is viewed in the home (on a television set or connected computer).

This solution included in TAMs shows how corrections to audience deviation are being made while maintaining the panel methodology (a representative sample of the Spanish population) in a mass consumption environment marked by inertia in television viewing. In other words, views are accumulated over seven days, based on the pattern of weekly consumption, which is also the basis for catch-up services (on-demand services mean a programme can be watched if originally missed in linear viewing, always with the aim of prioritising the scheduled television experience).

The much sought-after comprehensive disseminated audience measurement, which includes other devices, was given a definitive boost by the agreement between *Kantar Media* and *Comscore* (the company responsible for online measurement in Spain), using a method based on unified digital measurement. This merged television in all platforms (regardless of broadcast time and consumption device) and the online audience, so that each individual in the television panel also has their online viewing included (**Quintas-Froufe**; **González-Neira**, 2016). However, this new, complete, hybrid and non-duplicated measurement solution is only available to customers who decide to contract it.

5. Measurement formulas in online video platforms

Despite the specific weight of streaming platforms in the subscription model of the audiovisual market and the resulting need to compare their consumption with traditional television, the activity of the former services falls outside the conventional measurement system (**González-Neira**; **Quintas-Froufe**; **Gallardo-Camacho**, 2020). Their business model (based on monthly subscriptions, not advertising), the type of consumption generated by a lack of programme scheduling (destructured and at differing speeds) and the differing degrees to which these services are adopted in the home (compared to statistics on television penetration, which is around 100% of the population) means it is not only difficult to apply the main TAM indicators but also there is little desire to share information.

The case of *Netflix* is an excellent example. The company operates without having to share details on how well its programmes are doing. As it does not use advertising, it has no need to negotiate with advertisers or agencies. In addition, its economic model in relation to creators and rights owners is not based on royalty payments per play (except in the case of original productions in some EU countries with specific viewing quotas: over 10 million accounts that have completed 90% of an original production of the platform), but on paid-up licences, whereby a variable amount is paid, depending on how long the platform streaming licence lasts. If one also considers that they have their own mechanisms for identifying customers' consumption habits, there appears to be little incentive to develop shared, public surveys (**Huertas**, 2018).

A comparison of services and programmes on equal terms is relatively simple in the case of television. A television audience measurement system could be implemented because the channels agreed to accept external auditing and the methodology used. However, streaming platforms have shown no interest in being subject to independent control that would provide customers (production companies and creators) and the market with certain types of information. Quite the opposite. Apart from occasional promotional headlines accompanied by figures on how well its programmes are performing, 'non-audience' has become a habitual practice.

Hence the question is whether an audience measurement system can be defined and standardised for SVOD. Audiences today are diffuse but at the same time connected to the daily events (**Masip**; **Ruiz-Caballero**; **Suau**, 2019). This is described in **Callejo-Gallego** (2019) as a gaseous audience, one that arises in different places that are difficult to measure and register. And it is the volatility of this audience that makes users' adherence to content and the quality of this connection so important, in a dynamic that differs from traditional television consumption, instead resembling digital consumption. Interesting conclusions may be drawn by analysing the types of consumption and measurement associated with other online video distribution channels, such as *YouTube*, *Facebook*, *Instagram* and *Twitter*. Although the purpose of almost all metrics is to monetise advertising (which SVOD does not have), its consumer-centric approach is an interesting one. Elements used to 'assess' users' relationship with content include repeated use, intensity and the frequency of this relationship with the content-providing platform. As with television, the online environment has a basic quantitative metric: views (Image 1). Indeed, total cumulative views is the most frequently demanded indicator for SVOD platforms, as this is a real metric (not

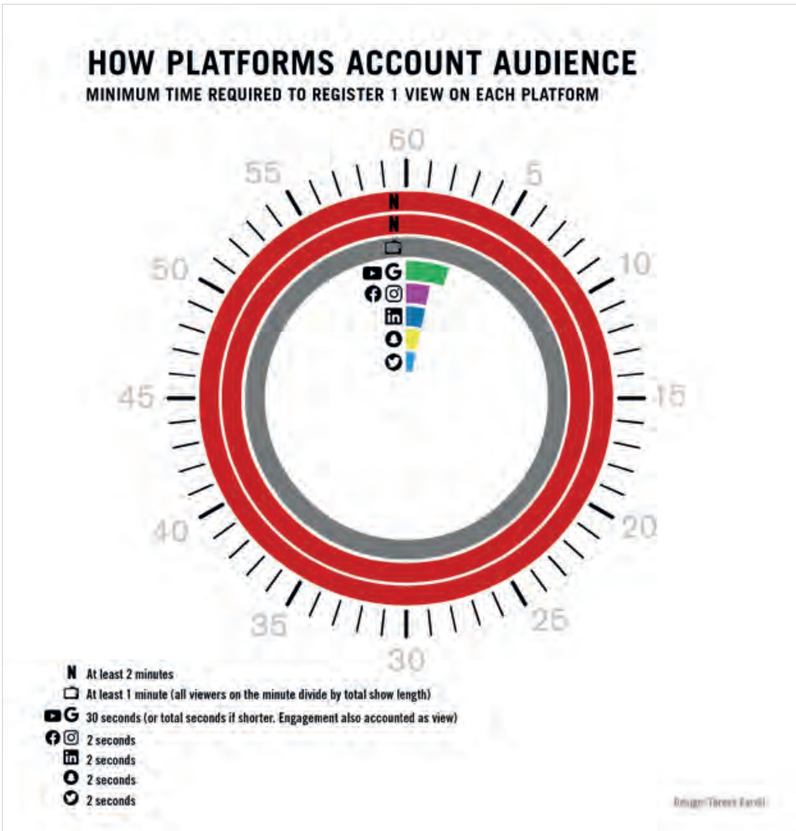


Image 1. How platforms account audience

a panel-based estimate), which is easy to extract and simple to understand. Furthermore, views are an easier way of isolating the voluntary act of wanting to watch a video (on demand) in a concept similar to *appointment TV*, where programmes are not watched as part of a programme schedule but specifically sought, thereby requiring a degree of commitment (**DeFino**, 2013). But the relationship of the audience to content may involve much more than just viewing. In a multidimensional model, such as the one analysed here, audience behaviour switches between different states which go beyond mere impact, such as reputation, interest, coverage and memory (**Napoli**, 2012).

Engagement enriches mere views in the case of unstructured consumption. But there remains a clear problem with integrating diverse forms of consumption, processing data and assigning values to each subjective audience attitude. Reaching a consensus on this weighting still poses a major hurdle

Given the anarchical, destructured nature of consumption on a streaming platform with a large catalogue, cumulative figures pose an additional problem: establishing a relevant time range (such as the 7-day time shift, based on the logic of weekly broadcasts). Views are also a somewhat superficial measure when the medium gives the user 'power' in controlling content broadcasting. Simple continuity of play and interaction quality are significant in terms of users' commitment to the platform, which is a cornerstone in these services, as discussed below.

6. New audience dimensions

How can the picture of consumption in the online environment be completed? As shown by the analytics channels provided for content creators and advertisers in the digital environment, cumulative views are complemented by new dimensions, more subjective metrics, such as average view duration, video percentage watched, audience retention and watch time. These variables aim to assess the degree of commitment not only to the video but also to the platform providing it, a concept (one of different degrees of attention, such as adhesion and commitment) whose importance was highlighted by **McQuail** (1992).

Recent academic literature includes an increasing number of references to these new audience dimensions, especially engagement, which is derived from the previous concept and highlights the direct relationship between users and content. However, there is still no consensus on the matter. Some authors associate it with online conversations that boost content liked by the audience (the basis of the social television phenomenon), while others highlight the user's close, committed relationship with the programme in question (**Huertas**, 2018). Whatever the case, all approaches agree that engagement enriches mere views in the case of unstructured consumption. But there remains a clear problem with integrating diverse forms of consumption, processing data and assigning values to each subjective audience attitude. Reaching a consensus on this weighting still poses a major hurdle.

7. Success and popularity for audiovisual content in the on-demand environment

The concept of success for audiovisual content is traditionally associated with its popularity which, according to the dictionary definition, means achieving fame and respect. Programme popularity is highly conditioned by the distribution channel. For commercial and pay channels, for instance, success is understood in terms of earnings, but in a different way to commercial channels, where programme acceptance (in terms of good audience figures) means the space can be profitable for advertising. In the case of pay television, whose main concern is ensuring minimal churn (i.e. number of customers leaving), acceptance of their offer creates customer loyalty and attracts new subscribers. The greater the customer retention and numbers of new subscribers, the greater the profit for the company. SVOD platforms share the latter concept of programme popularity since it matches their strategic business goal: attracting and retaining subscribers, creating loyalty to the service and obtaining good general product satisfaction rates (**Gómez-Uribe**; **Hunt**, 2015). Todd Yellin, Vice-President of Product Innovation, said on one occasion that *Netflix* measures programmes' success based on the happiness they provide, paraphrasing Marie Kondo and her popular message of keeping those things that provide joy: 'If people enjoy our content, if they're loving to come to *Netflix*, then we succeed' (**Roettgers**, 2019).

SVOD platforms seek programme popularity as a means of achieving their strategic business goal: attracting and retaining subscribers, creating loyalty to the service and obtaining good general product satisfaction rates

8. Audience behaviour in the context of subscription model streaming platforms

In SVOD platforms, with a monthly subscription payment, users access a full programme catalogue, all of which they can watch. But very popular programmes, the previously mentioned catalogue tentpoles, have a significant impact on attracting customers (**Neira**, 2020). As Ball explains,

> "This means that tentpole content doesn't just drive acquisition revenue, it drives the efficiency (and fans) of all other content investments as well" (**Ball**, 2019).

In other words, once users join the customer base, they are potentially exposed to other programmes that subsequently act as a hook in retaining them.

On-demand consumption invalidates the premise behind TAMs: collective, concentrated and synchronous consumption, structurally linked to scheduling (**Callejo-Gallego**, 2019). With streaming platforms, individual, disseminated and asynchronous consumption abounds, although paradoxically, as **Huertas** (2018) notes, this does not imply a decrease in continuous consumption. An exponential rise in viewing has been observed in platforms that release complete new seasons of series at once, producing uninterrupted 'binge' viewing sessions. SVOD has given rise to a new system of entertainment and a new type of audience. One might say this audience is no longer 'prime time' but 'my time': viewers who direct and manage their own audiovisual experience based on an abundant, disorganised offer. If we also bear in mind the market globalisation boosted by these operators, we might conclude that it is the source of global, homogeneous demand, which can be satisfied internationally by the same product (**Arrojo**, 2010; **Clares-Gavil**án, 2014; **Pacheco-Pailahual**, 2017; **Clares-Gavilán**; **Medina-Cambrón**, 2018; **Neira**; **Clares-Gavilán**; Sánchez-Navarro, 2020).

> SVOD has given rise to a new system of entertainment and a new type of audience. One might say this audience is no longer 'prime time' but 'my time'

Once the ability to select becomes a personal decision, the adhered audience, as opposed to audience as dispersed mass (**McQuail**, 1992), drives consumption flows that are multiplied by a huge range of motivations. The current situation suggests that such 'mass audience entertainment' (**Núñez-Ladevéze**; **Torrecillas-Lacave**; **Irisarri-Núñez**, 2019) is directly linked to popularity. With linear television, popularity is the seed from which a programme's appeal grows, through the dynamics of scheduling (at a specific time and date) and a selected, controlled product. In the context of streaming, popularity has become a key element in gaining visibility, not just in relation to the competition but also to other content on the same platform. With so many programmes to choose from, above and beyond the boost provided by marketing campaigns, popularity (once again understood as fame and respect) generates interaction and conversations. This phenomenon affects audience behaviour, activating codes of behaviour in other users and leading to greater interest in the programmes or series (**Gallego**, 2013; **Halpern**; **Quintas-Froufe**; **Fernández-Medina**, 2016). In the context of *Netflix*, the case study analysed in this article, it is interesting to note how the company, in its letters to shareholders, uses the term 'density of viewing' to describe the phenomenon whereby a rise in a programme's reputation boosts views, which is undoubtedly beneficial to the company: greater visibility leads to more views, which in turn leads to greater retention and conversation, more conversation leads to greater popularity, and greater popularity to greater impact, which, in the end, is a potential lever to attract new customers.

The recent addition of programme popularity ranking by country to the *Netflix* platform is fully aligned with this philosophy (Image 2). As explained on their website, this is a content selection updated daily, which varies with users' viewing history. The list is drawn up from programmes watched for at least two minutes in the last 24 hours, following the methodology used by the platform to calculate views.

9. How *Netflix* conceptualises and measures audiences

The desire to maximise the intensity of audience attention is fully applicable to the *Netflix* culture and helps achieve a number of objectives. For *Netflix*, the popularity of a series or film is an important aspect for strengthening the brand (generating prestige for the platform). It is also important in ensuring content serves as leverage for new subscribers (attraction) and as a key element in its relationship with existing ones (retention). All major investment in content is expected to boost growth in subscribers and retain the loyalty of current ones. This is achieved particularly well by popular programmes. As **Toonkel**, **Dotan** and **Shah** (2019), explain, *Netflix* judges the value of each individual programme as its ability attract and retain customers, a concept the company terms the *adjusted viewer rate*. In fact, this is a weighted quantitative metric (number of views), as it gives greater weight to views by people watching the content 24 hours after subscribing to *Netflix* or after weeks of not connecting to the service (who were, therefore, at risk of cancelling). In general terms, the regular (already loyal) viewer is assigned a lower value. The resulting figure is matched to the programme production budget to provide a second metric, the so-called efficiency score, to determine how efficient the investment

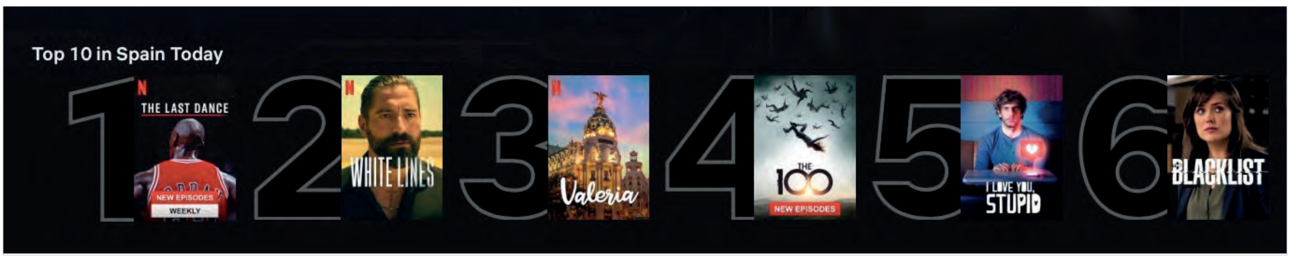


Image 2. Top 10 in Spain. Source: *Netflix.com*

is in generating new subscribers. Programme popularity is relevant to the extent it attracts new customers to the platform or gets customers to use the service again after a long period of absence (reducing the likelihood of their leaving).

Image 3. *Birdbox* frame

Netflix uses this constructed audience (**Huertas**, 2006) internally as an efficiency variable, where each view is weighted in terms of attraction and retention, taking into account the cost of the programme. As well as this internal audience, there is another external audience, more closely aligned to traditional TAM ratings, where the figures recorded for popular programmes are used as a publicity strategy. Recently, *Netflix* has been highly prolific in publicising its own audience figures, although they are not externally audited. The company's figures are global (not per country), associated with homes (accounts, not users linked to them) and cover a variable period (ranging from the release day to one month later). The parameters appear in a report presented by *Netflix* in July 2019 at the request of the *British Parliament*, as documentation for a session on public service broadcasting and video-on-demand operators. In the report, *Netflix* states that the company divides its users into three categories:

- *completers*: accounts that have watched 90% of a film or season;
- *watchers*: accounts that have seen 70% of a film or season;
- *starters*: accounts that have decided to watch at least two minutes of a film or season.

The first data to be published on its social media (on programmes such as *Birdbox* (Image 3), *When they see us*, *Élite*, *You*, *La casa de las flores* and *The Irishman*) referred to watchers.

However, there was a change in criteria with the release of *The witcher* in December 2019. Since then the figures it provides are for starters (accounts that have decided to watch at least two minutes of a film or series), a similar parameter to the audience base used for traditional television (one minute, although *Netflix* does not offer weighted figures) and the calculation used by the *BBC* for its *iPlayer* (explicitly referred to by the company in its Q4 2019 letter to shareholders).

10. *Money heist* as a case study

Money heist provides an appropriate case study for assessing the concept of programme popularity in relation to two different distribution channels: a national commercial television channel and a global streaming platform.

The series started as a production by *Atresmedia* and *Vancouver Media*, divided into two parts of nine and six episodes, respectively. It was released on Tuesday, 2 May 2017, on the *Antena 3* channel, with an audience of 4,900,000 viewers and a 25.1% share. By the end of the season, in June that same year, the viewers and share had halved (2,176,000 viewers and 14.7%). There followed a four-month break in the broadcast, coinciding with the summer holidays, and the first episode of the second part was broadcast in October. Although prime-time audience figures for this episode exceeded the other two major channels, the figures continued to drop, while they remained stable for the series on its competitors' channels (Image 4).

> *Netflix* uses the term 'density of viewing' to describe the phenomenon whereby a programme's popularity boosts views, which is undoubtedly beneficial to the company: greater visibility leads to more views, which in turn leads to greater retention and conversation, more conversation leads to greater popularity, and greater popularity to greater impact, which acts as a lever to attract new customers

The first digital run for *Money heist* was on *Atresplayer*, on the station's catch-up service. According to *Atresmedia*'s director of product design and business development at the time, Jesús Moreno, the series averaged around 200,000 unique video users, a figure that not only remained stable but also rose slightly in the second season (up to 203,000 unique users) (**Moreno**, 2019; interviewed on 25/03/2019, authors' transcription and translation).

Both seasons of *Money heist* were added to the *Netflix* catalogue (end of 2017 and April 2018), adjusting the episode length outside the domestic market to the service's regular format (40-50 minutes). Twelve days after the release of the second season, the company announced letter to shareholders (for Q1 2018) that *Money heist* was the most viewed non-English language series in the platform's history. This practice, offering viewing data relative to other programmes on the same service, is increasingly common in the streaming platform market (**Cascajosa-Virino**, 2018).

A month later, *Netflix* acquired the rights to the series to produce more seasons (Image 5).

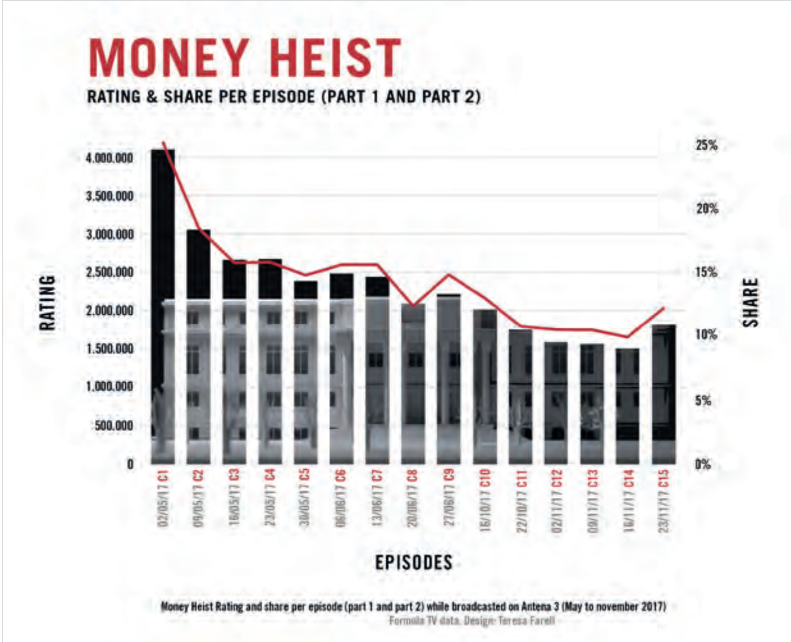


Image 4. *Money heist*. Rating and share per episode (part 1 and part 2). Source of data: *Fórmula TV*

This second online life for *Money heist* on a global streaming platform such as *Netflix* provided a clear boost to its popularity. As well as the rise in potential audience in other countries (*Netflix* is present in 190 countries), the series benefited from personalised recommendation algorithms, with proven effectiveness in boosting content discovery and consumption among user communities whose audiovisual preferences match the series (**Fernández-Manzano**; **Neira**; **Clares-Gavilán**, 2016). Furthermore, this data intelligence helps it forecast potential audiences for its series. Its Q1 2020 letter to shareholders explicitly refers to this point (*Netflix Investors*, 2020b), as it predicted an audience of 69 million viewers for the first month of season four (recently released on the platform).

Image 5. *Netflix* acquired the rights to produce more seasons of *Money heist*

For *Money heist*, inclusion in the *Netflix* catalogue opened up new access formulas and helped strengthen consumption of the series, enhancing its reputation (**Roel**, 2019). In the online world at the current time, success of audiovisual content is accompanied by a large amount of information, large volumes of complex, heterogeneous data now the subject of analysis by companies looking to operate at mixers, with the aim of making sense of the information and make it useable for comparative purposes (**Hernández-Pérez**; **Rodríguez-Mateos**, 2016). In this context, the work of *Parrot Analytics* is particularly relevant. The company has developed its own analysis system to research content popularity on digital distribution environments, based on a conceptual framework that quantifies supply and demand in the global attention economy, using artificial intelligence technology to capture and process big data.

Their work is based on their own measurement unit termed *demand expression*. According to Alejandro J. Rojas, the company's director of applied analytics,

> "previously, content offer was limited by TV channel programming times in a market. Today, the offer includes thousands of shows which television viewers can consume when they want, where they want, on multiple screens (television, mobile, computer, etc.) and platforms (free-to-air television, pay TV, OTTs). Given the abundant offer and diversity of access, traditional panel or sample-based demand measurement methodology loses its capacity to reflect audience behaviour globally. Today, television viewers interact actively with their favourite content, through discussions on social media, searching for and reading additional information online, viewing

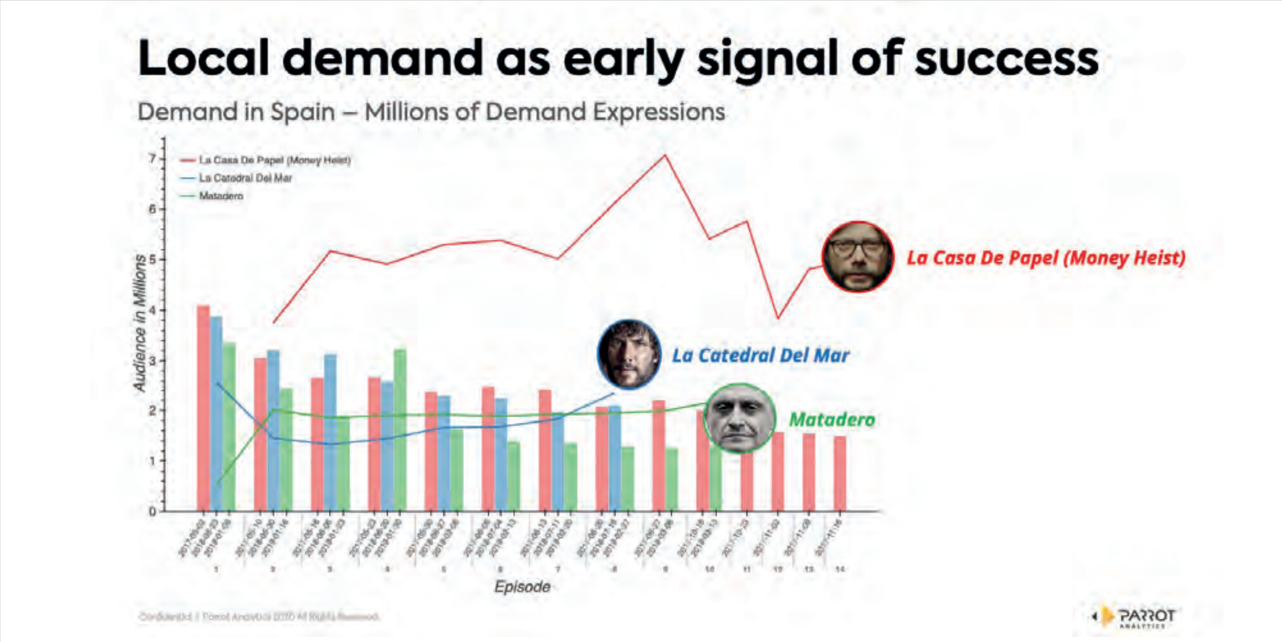


Image 6. Comparison of "demand expressions" of 3 series

> online promotional videos and even illegal peer-to-peer downloading of episodes. All such online activities leave a digital footprint which is collected and processed daily by the *Parrot Analytics* infrastructure to generate the demand expressions produced by each programme" (**Rojas**, 2020; interviewed on 07/04/2020, authors' transcription and translation).

Demand expressions include all online activities associated with each programme using an algorithm that weights each activity according to the effort it requires. Effort is assessed in relation to its execution time, providing an end result that quantifies attention given by the public to each programme. The *Parrot Analytics* data on the *Money heist* case study offer interesting results. Firstly, they show similar behaviour in the ratings for different fictional content on the same platform. *Money heist* had higher ratings than other two cases taken to compare (*Cathedral of the sea* [original title: *La catedral del mar*] and *Slaughterhouse* [original title: *Matadero*]) on the *Antena 3* schedule. But the impact of Àlex Pina's series was much higher even before its inclusion in the *Netflix* catalogue (Image 6). However, the increase in demand expressions was considerable once the series was added to the catalogue, both in Spain and internationally, while demand for the other two remained much more modest (Image 7).

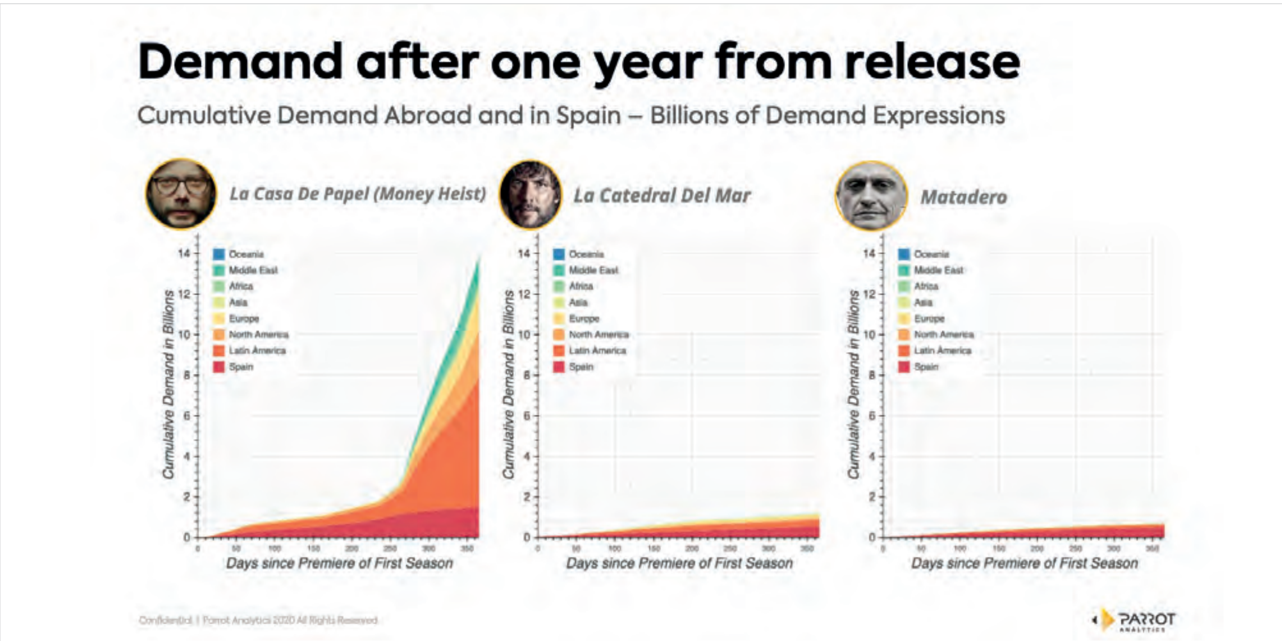


Image 7. Comparison of "expressions of demand" of 3 series after one year of their launch

It is worth noting that this second life for series via on-demand video platforms, which has boosted the exportability of fiction internationally, clearly shows how important it is for television channels to establish a launch pad for their commercial cycle (**Cascajosa-Virino**, 2018). According to Francisco Sierra Hernando, director of digital content and social media at *Atresmedia Televisión*, the growth in demand for their series from SVOD platforms is because

> "they realise that, independently of the audience for the free-to-air broadcast or on catch-up, we have been producing great series".

In April 2020, the 10 most widely consumed *Netflix* products included four by the *Atresmedia* brand:

- the fourth season of *Money heist*;
- *Locked Up* (original title: *Vis a vis*), whose spin-off *El oasis* was also in the top 10;
- the first season of *Toy boy*, another series to become an international hit, and which had recently been broadcast on *Antena 3*;
- and a fourth product, a film rather than a series, but also produced by *Atresmedia Studios*, *The legacy of the bones* (original title: *El legado de los huesos*).

In his opinion, this new product market clearly shows how release windows have changed. *Toy boy* is a good example:

> "First it was released on *Atresplayer Premium*. Four weeks after the release of the first episode, it was broadcast on television. After it had been shown on the channel, all the VOD content was transferred to *Netflix*, where it quickly became one of the most viewed series in many countries".

Popularity, as an emerging element in weighting programme success, has led traditional operators to redesign their strategy. Sierra went on to say that

> "the *Money heist* phenomenon led to the relaunch of many direct sales for other products and also accelerated the creation of an original content production division, *Atresmedia Studios*, where production is based on attention to quality criteria, fiction style, awareness of our public as a television channel, but targeting platforms such as *Netflix*, *Amazon* and *Movistar*" (**Sierra**, 2019; interviewed on 25/03/2019, authors' transcription and translation).

It also boosted *Atresmedia*'s own platform, *Atresplayer*.

In fact, television channels no longer use TAMs as the sole metric for success. In the case of series, as noted by Jesús Moreno,

> "the only valid metric at the end of the day is the profitability of the series; in other words, how much profit the series makes over its life cycle. And this life cycle starts with the television broadcast, and then continues with its marketing in advertising VOD and on subscription VOD, with sales to SVOD platforms such as *Netflix*, *Amazon* and *HBO* and with international sales..., all of which is part of the success of a series" (**Moreno**, 2019; interviewed on 25/03/2019, authors' transcription and translation).

After its inclusion in the *Netflix* catalogue, the success of *Money heist* can be understood in a number of ways. As third-party content, its efficiency was more closely aligned to the number of viewing hours it was able to generate, increasing its value in terms of customer retention. Its rise in popularity and the second phase of its life cycle, as *Netflix original* content, increased its value as a tool for attracting new subscribers. This hypothesis is backed up by the company's carefully planned release strategy: aiming to concentrate viewing in its first few days on the platform, with social media communication dynamics that have redefined the concept of social television. It is no longer a collective conversation taking place simultaneously with the broadcast (an experience which the platform has disrupted with its viewing dynamics), but a community that feeds the feeling of belonging, where conversation raises interest in the programme and helps its spread, via the official social media accounts of *Netflix*, the series itself and its leading actors (**Neira**, 2020).

11. Conclusions

The main objective of this article is to help progress toward a new concept of audience in the context of on-demand video consumption in the subscription model (taking *Netflix* as a reference, given its market importance) and reflect on whether a single concept of audience can be applied to all on-demand audiovisual consumption and business models. To do this, the following research questions (RQ) were posed:

RQ1: How do audiences on streaming platforms behave? How is audience quantified and/or weighted? Can we, in this context, continue to consider audience as goods?

We conclude that, in the context of subscription model streaming, the value of the audience as goods persists, although this has switched from its commercial worth (advertising) to its impact on the platform's body of customers (attraction and retention) and brand popularity. The new model (*atawad+ac*) involves infinite consumption combinations that are difficult to standardise. In the specific case of *Netflix*, the audience is weighted or quantified depending on the intended purpose. Internally, content viewing figures are weighted, giving greater importance to new customers who view the content as their first choice and existing customers at risk of cancelling their subscription. In this case, audience is used to assess the efficiency of programmes, as an indicator to evaluate the money invested in content, based on the quality and quantity of the audience it has managed to attract. Along with this audience constructed for internal (non-public) use, there is another type of audience, external and cumulative, which the company uses as a publicity strategy and, by extension, a measure of success: the figure quantifies all accounts that 'decided to watch at least two minutes of a programme', a concept similar to television ratings.

RQ2: What aspects should a new, revised concept of audience consider in the context of SVOD? What new audience dimensions does the concept of video consumption on streaming platforms introduce?

Based on the analysis, we conclude that a revised concept of audience in the context of SVOD should consider a number of aspects:

- It is constructed from an enormous volume of data whose main characteristic is its fragmentation (fragmented audience).
- Audience research in this context involves interpreting and assigning a value to each new audience dimension arising from online consumption (weighted audience) and not just accumulating data.
- The volatility inherent in these platform audiences, jumping easily between content and services –a volatile or 'gaseous' audience, using the term in **Callejo-Gallego** (2019)–, suggests that weight should be given to what is chosen and the quality of such choices, thereby producing new audience dimensions based on the connection established with content (adhered audience).

Given this revised concept of SVOD audience (fragmented, weighted, volatile and adhered), this study concludes that new dimensions above and beyond data provided by TAMs should be included. Such new dimensions are based on the premise that the value of the audience is not just its size, but also its engagement (users' involvement with content) and its depth of attention (audience density, to use *Netflix*'s term). In assigning value to audience attention, the methodology used by *Parrot Analytics*, which takes us into the field of big data, opens up an interesting line of research: varying the weighting based on users' level of effort, both internally (frequency, intensity and repeat viewing) and externally (posts on social media, information searches in *Google*, illegal downloads).

RQ3: Do new audience dimensions require a renewed concept of popularity?

The conclusion from the case study is that they do. Given the general lack of quantitative data, popularity now has a major qualitative component, a diffuse but evident impact that provides visibility for a programme, involving several subjective elements arising from the special relationship created between user and content, such as engagement and reputation (the key to retaining and attracting customers) and acceptance/applause that ensures the programme is in the conversation (based on the online impact of the content, a concept similar to *Parrot Analytics*'s demand expressions).

RQ4: Can a single concept of audience be applied to all on-demand audiovisual consumption and business models?

Given that this article focuses on a case study of a specific platform, it does not provide enough data to give a definitive conclusion. However, we can offer some preliminary thoughts. The heterogeneity intrinsic to the business model of these platforms introduces elements that significantly impede the construction of a global, standard concept of audience for all SVOD services. This is due to a number of factors:

- Unlike television channels, there is no level playing field for streaming platforms with regard to consumption and penetration in the home. Market share can produce distortions in comparative rankings, as content is not fully available to all.
- Content life cycle on a streaming platform involves a number of different phases, thereby transforming the concept of success. With regard to a streaming platform's business goal (attracting and retaining customers), the impact of recently released series in term of popularity is greater (giving it a greater capacity to attract new subscribers) than that of catalogue content (which may have little popularity outside the platform while remaining extraordinarily popular among existing customers, making it a tool for retention). On streaming platforms such as *Netflix*, the most valuable programmes are those viewed first by new subscribers or customers at risk of cancelling their subscription.
- Release dynamics also require a different reading of the data. Block release is more likely to encourage intense, concentrated 'binge' consumption than does weekly distributed release. Calculating total audience or average audience per episode provides very different readings.
- Not all SVOD services embrace this business formula. Subscription models are starting to use hybrid formulas that combine open broadcast with advertising (free video on demand, FVOD), SVOD (without advertising), advertising video on demand (AVOD) and transactional video on demand (TVOD, permitting content to be temporarily rented). The organisational formula produces catalogues of different types and different viewing combinations, with a significant impact on customers' consumption patterns.

On streaming platforms such as *Netflix*, the most valuable programmes are those viewed first by new subscribers or customers at risk of cancelling their subscription

These conclusions from the specific case study of *Netflix* and *Money heist* open up an interesting line of research for future studies, looking at more platforms and case studies, to help build a new concept of audience in the context of SVOD consumption. Similarly, more studies on this issue will help assess whether the concept can be extrapolated to all the formulas this audiovisual practice might adopt, based on the general research objective used for this specific analysis.

12. References

Álvarez-Monzoncillo, José-María (coord.) (2011). *La televisión etiquetada: nuevas audiencias, nuevos negocios*. Madrid: Ariel; Fundación Telefónica. ISBN: 978 84 08 09870 6
https://mediaandentertainmentobservatory.files.wordpress.com/2012/04/la_television_etiquetada.pdf

Arrojo, María-José (2010). "Distribución y financiación de formatos audiovisuales en Internet. Nuevas estrategias para rentabilizar los contenidos". *Telos*, n. 85.
https://telos.fundaciontelefonica.com/archivo/numero085/distribucion-y-financiacion-de-formatos-audiovisuales-en-internet

Ball, Matthew (2019). "Content, cars and comparations in the Streaming Wars". *Matthewball.vc*, May, 3.
https://www.matthewball.vc/all/contentcarscomparisons

Barlovento Comunicación (2019). *Análisis televisivo 2019*. Barlovento Comunicación.
https://www.barloventocomunicacion.es/wp-content/uploads/2019/12/analisis-televisivo-2019-BarloventoComunicacion-1.pdf

Callejo-Gallego, Manuel-Javier (2002). "Globalización y digitalización de las audiencias". *Política y sociedad*, v. 39, n. 1, pp. 69-82.
http://revistas.ucm.es/index.php/POSO/article/view/POSO0202130069A/24049

Callejo-Gallego, Manuel-Javier (2019). "Investigación de audiencias: lost in transition". *CIC. Cuadernos de información y comunicación*, v. 24, pp. 155-173.
https://doi.org/10.5209/ciyc.64636

Cascajosa-Virino, Concepción (2016). "Buscando al espectador serial desesperadamente: la nueva investigación de audiencias y la serie *El ministerio del tiempo*". *Dígitos. Revista de comunicación digital*, n. 2, pp. 53-69.
https://revistadigitos.com/index.php/digitos/article/view/50

Cascacoja-Virino, Concepción (2018). "De la televisión de pago al vídeo bajo demanda. Análisis de la primera temporada de la estrategia de producción original de ficción de Movistar+". *Fonseca: journal of communication*, n. 17.
https://doi.org/10.14201/fjc2018175774

Castillo-Izquierdo, Jessica (2016). *Teoría de programación de radio y televisión*. Publicacions de la Universitat Jaume I. ISBN: 978 84 16356 91 1
http://repositori.uji.es/xmlui/bitstream/handle/10234/162512/s116_impressora.pdf

Clares-Gavilán, Judith (2014). *Estructura y políticas públicas ante los nuevos retos de la distribución y consumo digital de contenido audiovisual. Los proyectos de vídeo bajo demanda de cine Filmin y Universciné como estudio de caso*. Tesis doctoral. Universitat Ramon Llull.
http://www.tesisenred.net/handle/10803/247706

Clares-Gavilán, Judith; **Medina-Cambrón, Alfons** (2018). "Desarrollo y asentamiento del vídeo bajo demanda (VOD) en España: el caso de *Filmin*". *El profesional de la información*, v. 27, n. 4, pp. 909-920.
https://doi.org/10.3145/epi.2018.jul.19

Clares-Gavilán, Judith; **Merino-Álvarez, Cristina**; **Neira, Elena** (2019). *La revolución over the top. Del vídeo bajo demanda (VOD) a la televisión por internet*. Editorial UOC. ISBN: 978 84 91803966

Corbella, Joan M. (2010). "La nueva ecología del audiovisual: nuevos actores, viejos y nuevos problemas". *Quaderns del CAC*, 34, v. 13, n. 1, pp. 37-45.
https://www.cac.cat/sites/default/files/2019-04/Q34_Corbella_ES.pdf

Cunningham, Stuart; **Silver, John** (2013). *Screen distribution and the new King Kongs in the online world*. Palgrave Macmillan. ISBN: 978 1 349459766

Curtin, Michael; **Holt, Jennifer**; **Sanson, Kevin** (2014). *Distribution revolution: Conversations about the digital future of film and television*. University of California Press. ISBN: 978 0 520283251

De-Durán, Alberto (2014). *Investigación de audiencias y planificación de medios*. Publicidad y Relaciones Públicas, Universidad Rey Juan Carlos.
http://www.albertodeduran.es/wp-content/uploads/2014/08/3x09-Investigación-de-audiencias-y-planificación-de-medios.pdf

DeFino, Dean J. (2014). The HBO effect. Bloomsbury Academic. ISBN: 978 1 441180438

Fernández-Manzano, Eva-Patricia; **Neira, Elena**; **Clares-Gavilán, Judith** (2016). "Data management in audiovisual business: *Netflix* as a case study". *El profesional de la información*, v. 25, n. 4, pp. 568-576.
https://doi.org/10.3145/epi.2016.jul.06

Gallardo-Camacho, Jorge; **Sierra-Sánchez, Javier**; **Lavín, Eva** (2019). "The timeshifted viewing cycle of television programmes after their linear broadcast in Spain". *Communication & society*, v. 32, n. 2, pp. 29-43.
https://doi.org/10.15581/003.32.2.29-43

Gallego, Francisco (2013). "Social TV analytics: Nuevas métricas para una nueva forma de ver televisión". *Index.comunicación*, v. 3, n. 1, pp. 13-39.
http://journals.sfu.ca/indexcomunicacion/index.php/indexcomunicacion/article/view/49/56

García-Santamaría, José-Vicente; **Barranquero-Carretero, Alejandro**; **Rosique-Cedillo, Gloria** (2017). "El mercado televisivo español del siglo XXI: concentración y precariedad". *Observatorio (OBS*)*, v. 11, n. 3.
http://obs.obercom.pt/index.php/obs/article/view/774

Gillespie, Marie (ed.) (2007). *Media audiences.* Maidenhead and New York: Open University Press. ISBN: 978 0 335218820

Gómez-Uribe, Carlos A.; **Hunt, Neil** (2016). "The Netflix recommender system: Algorithms, business value, and innovation". *AMC Transactions on management information systems (TMIS)*, v. 6, n. 4, article n. 13.
https://doi.org/10.1145/2843948

González-Neira, Ana; **Quintas-Froufe, Natalia** (2020). "Preferencias televisivas de la audiencia española (2005-2019): programas, formatos y cadenas". *Estudios sobre el mensaje periodístico*, v. 26, n. 2, pp. 583-595.
https://doi.org/10.5209/esmp.67777

González-Neira, Ana; **Quintas-Froufe, Natalia**; **Gallardo-Camacho, Jorge** (2020). "La medición de la audiencia televisiva: desafíos ante las nuevas plataformas de video". *Comunicación y sociedad*, v. 17, e7284.
https://doi.org/10.32870/cys.v2020.7284

Halpern, Daniel; **Quintas-Froufe, Natalia**; **Fernández-Medina, Francisco** (2016). "Interacciones entre la televisión y su audiencia social: hacia una conceptualización comunicacional". *El profesional de la información*, v. 25, n. 3, pp. 367-375.
https://doi.org/10.3145/epi.2016.may.06

Hernández-Pérez, Tony; **Rodríguez-Mateos, David** (2016). "Medición integral de las audiencias: sobre los cambios en el consumo de información y la necesidad de nuevas métricas en medios digitales". *Hipertext.net*, n. 14.
http://doi.org/10.2436/20.8050.01.32

Holt, Jennifer; **Sanson, Kevin** (2013). *Connected viewing: Selling, streaming, & sharing media in the digital age*. Routledge. ISBN: 978 0 415813600

Huertas, Amparo (2002). *La audiencia investigada*. Gedisa Editorial. ISBN: 8474329574

Huertas, Amparo (2006). "De la medición de la audiencia al conocimiento de los públicos". *Portal de la comunicación InCom-UAB. Lecciones del portal.*
https://incom.uab.cat/portalcom/wp-content/uploads/2020/01/22_esp.pdf

Huertas, Amparo (2018). "Continuidades y rupturas en la medición de las audiencias". *Portal de la comunicación InCom-UAB. Lecciones del portal.*
https://incom.uab.cat/portalcom/wp-content/uploads/2020/01/104.pdf

Iglesias, Francisco (1985). "Investigación de audiencias en televisión y mejora de calidad de los contenidos". *Documentación de las ciencias de la información*, v. 9, pp. 225-233.
https://revistas.ucm.es/index.php/DCIN/article/view/DCIN8585110225A

Jauset, Jordi A. (2014). *Estadística para periodistas, publicitarios y comunicadores*. Editorial UOC. ISBN: 978 84 90640982

Keating, Gina (2012). *Netflixed: the epic battle for America's eyeballs*. Penguin Group. ISBN: 978 1 101601433

Landau, Neil (2016). *TV outside the box: trailblazing in the digital television revolution. Focal Press*. ISBN: 978 113863936

Lobato, Ramón (2019). *Netflix nations. Netflix the geography of digital distribution*. New York University Press. ISBN: 978 1 479841516

Lotz, Amanda D. (2014). *The television will be revolutionized*, 2nd ed. New York University Press. ISBN: 978 1 479865253

Lotz, Amanda D. (2018). *We now disrupt this broadcast: how cable transformed television and the Internet revolutionized it all*. The MIT Press. ISBN: 978 0 262037679

Masip, Pere; **Ruiz-Caballero, Carlos**; **Suau, Jaume** (2019). "Active audiences and social discussion on the digital public sphere. Review article". *El profesional de la información*, v. 28, n. 2, e280204.
https://doi.org//10.3145/epi.2019.mar.04

McQuail, Dennis (1992). *Media performance: Mass communication and the public interest*. SGAE publications Ltd. ISBN: 978 0 803982956

Morley, David (2003). *Television, audiences and cultural studies*. Routledge. ISBN: 978 0 415054454

Napoli, Philip M. (2008). "Toward the model of audience evolution: New technologies and the transformation of the media audiences". *McGannon Center working paper series*. Paper 15.
http://fordham.bepress.com/mcgannon_working_papers/15

Napoli, Philip M. (2012). "Audience evolution and the future of audience research". *The international journal of media management*, v. 14, n. 2, p. 79-97.
https://doi.org/10.1080/14241277.2012.675753

Napoli, Philip M. (2016). "Special issue introduction: Big data and media management". *International journal on media management*, v. 18, n. 1, pp. 1-7.
https://doi.org/10.1080/14241277.2016.1185888

Neira, Elena (2015). *La otra pantalla. Redes sociales, móviles y la nueva televisión*. Barcelona: UOC. ISBN: 978 84 91161165

Neira, Elena (2020). *Streaming wars. La nueva televisión.* Libros Cúpula. ISBN: 978 84 48026585

Neira, Elena; **Clares-Gavilán, Judith**; **Sánchez-Navarro, Jordi** (2020). "Impacto de los servicios OTT en la generación de comunidades de gustos y nichos globales: Netflix como estudio de caso". *Comunicació. Revista de recerca i d'anàlisi*, v. 37, n. 2.
https://doi.org/10.2436/20.3008.01.198

Netflix investors (2018). "Letter to shareholders. Final Q1 2018". *Netflix*, January 21.
https://s22.q4cdn.com/959853165/files/doc_financials/quarterly_reports/2018/q1/FINAL-Q1-18-Shareholder-Letter.pdf

Netflix investors (2020a). "Letter to shareholders. Final Q4 2019". *Netflix*, April 16.
https://s22.q4cdn.com/959853165/files/doc_financials/2019/q4/FINAL-Q4-19-Shareholder-Letter.pdf

Netflix investors (2020b). "Letter to shareholders. Final Q1 2020". *Netflix*, April 21.
https://s22.q4cdn.com/959853165/files/doc_financials/2020/q1/FINAL-Q1-20-Shareholder-Letter.pdf

Núñez-Ladevéze, Luis; **Torrecillas-Lacave, Teresa**; **Irisarri-Núñez, José-Antonio** (2019). "Audiencias y redes: pautas de consumo de industria cultural en España". *Estudios sobre el mensaje periodístico*, v. 25, n. 1, pp. 421-441.
https://doi.org/10.5209/ESMP.63738

Pacheco-Pailahual, Stephanie (2017). "Luis A. Albornoz; María-Trinidad Leiva (eds.). Diversidad e industria audiovisual: el desafío cultural del siglo XXI". *CIC. Cuadernos de información y comunicación*, v. 22, pp. 315-345.
https://doi.org/10.5209/CIYC.55985

Papí-Gálvez, Natalia; **Perlado-Lamo-de-Espinosa, Marta** (2018). "Investigación de audiencias en las sociedades digitales: su medición desde la publicidad". *El profesional de la información*, v. 27, n. 2, pp. 383-393.
https://doi.org/10.3145/epi.2018.mar.17

Portilla, Idoia (2015). "Television audience measurement: proposals of the industry in the era of digitalization". *Trípodos*, n. 36, pp. 75-92.
http://www.tripodos.com/index.php/Facultat_Comunicacio_Blanquerna/article/view/243

Portilla, Idoia; **Vara-Miguel, Alfonso**; **Díaz-Espina, Carolina** (2016). "Innovación, modelos de negocio y medios de audiencias ante los nuevos retos del mercado de la comunicación" En: Sábada-Chalezquer, Charo; García-Avilés, José-Alberto; Martínez-Costa, María-del-Pilar. *Innovación y desarrollo de los cibermedios en España*. Universidad de Navarra. Eunsa, pp. 31-39. ISBN: 978 84 313 3125 2

Quintas-Froufe, Natalia; **González-Neira, Ana** (2016). "Consumo televisivo y su medición en España: camino hacia las audiencias híbridas". *El profesional de la información*, v. 25, n. 3, pp. 376-383.
https://doi.org/10.3145/epi.2016.may.07

Rodríguez-Mateos, David; **Hernández-Pérez, Tony** (2015). "Televisión social en series de ficción y nuevos roles del documentalista audiovisual: el caso de *El ministerio del tiempo*". *Index comunicación*, v. 5, n. 3, pp. 95-120.
https://journals.sfu.ca/indexcomunicacion/index.php/indexcomunicacion/article/view/200

Roel, Marta (2019). "Aproximación al estudio del consumo televisivo en el ecosistema audiovisual digital español: de la audiencia audimétrica a la audiencia poliédrica". *Estudios sobre el mensaje periodístico*, v. 25, n. 1, pp. 477-492.
https://doi.org/10.5209/ESMP.63741

Roettgers, Janko (2019). "Why Netflix will keep breaking hearts and cancelling shows". *Variety*, Mar 20.
https://variety.com/2019/digital/news/netflix-show-cancellations-metrics-business-1203167540

Roncallo-Dow, Sergio (2017). "Introducing three dimensions of audience fragmentation". *Signo y pensamiento*, v. 36, n. 70, pp. 74-90.
https://doi.org/10.11144/Javeriana.syp36-70.idaf

Smith, Michael D.; **Telang, Rahul** (2016). *Streaming, sharing, stealing. Big data and the future of entertainment*. The MIT Press. ISBN: 978 0 262034791

Toonkel, Jessica; **Dotan, Tom**; **Shah, Beejoli** (2019). "Netflix plays new role: budget-concious". *The information*, July 1.
https://www.theinformation.com/articles/netflix-plays-new-role-budget-conscious

Tryon, Chuck (2013). *Reinventing cinema and on-demand culture*. Rutgers University Press. ISBN: 978 0 813561097

UK Parliament (2019). *Netflix supplementary written evidence.* Communications and Digital Committee.
http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/communications-and-digital-committee/public-service-broadcasting-in-the-age-of-video-on-demand/written/104558.html

Vacas-Berdanyes, Ricardo (2012). "Pantallas y audiencias en mestizaje". *Capçalera*, v. 3, pp. 32-35.

Vázquez-Herrero, Jorge; **González-Neira, Ana**; **Quintas-Froufe, Natalia** (2019). "La audiencia activa en la ficción transmedia: plataformas, interactividad y medición". *Revista latina de comunicación social*, v. 74, pp. 73-93.
http://doi.org/10.4185/RLCS-2019-1322

Webster, James G. (2014). *The marketplace of attention: How audiences take shape in a digital age*. Cambridge, MA: The MIT Press. ISBN: 978 0 262529891

Yin, Robert K. (2009). *Case study research. Design and methods*. Thousand Oaks: Sage. ISBN: 978 1 412960991

Interviews

Moreno, Jesús. Director of product design and business development at *Atresmedia Digital* (25/03/2019).

Rojas, Alejandro. Director of applied analytics at *Parrot Analytics* (07/04/2020).

Sierra Hernando, Francisco. Director of digital content and social media at *Atresmedia Televisión* (25/03/2019).

Software para gestión de archivos audiovisuales de patrimonio cultural *Dédalo*

Software for managing audiovisual archives of cultural heritage *Dédalo*

Jesús-Daniel Cascón-Katchadourian; Javier Guallar

Cómo citar este artículo:

Cascón-Katchadourian, Jesús-Daniel; **Guallar, Javier** (2021). "Software para gestión de archivos audiovisuales de patrimonio cultural *Dédalo*". *Profesional de la información*, v. 30, n. 1, e300111.

https://doi.org/10.3145/epi.2021.ene.11

Artículo recibido el 27-05-2020
Aceptación definitiva: 02-07-2020

Jesús-Daniel Cascón-Katchadourian ✉
https://orcid.org/0000-0002-3388-7862

Universidad de Granada
Fac. de Comunicación y Documentación
Campus Universitario de Cartuja
Edificio Máximo. 18071 Granada, España
cascon@ugr.es

Javier Guallar
https://orcid.org/0000-0002-8601-3990

Universitat de Barcelona
Centre de Recerca en Informació, Comunicació i Cultura
Fac. d'Informació i Mitjans Audiovisuals
Melcior de Palau, 140
08014 Barcelona, España
jguallar@ub.edu

Resumen

Esta investigación realiza una descripción y valoración de las características de *Dédalo*, un software de gestión de documentación audiovisual o *media asset management* (MAM) especializado en gestionar patrimonio cultural, material, inmaterial o memoria oral. Conocer este software puede ayudar a los bibliotecarios, archiveros y documentalistas, antropólogos e historiadores, pero también a toda clase de profesionales que gestionen documentación audiovisual, tanto de entes privados como públicos, a dar a conocer con éxito, de forma fácil y rápida, las colecciones audiovisuales de sus instituciones y organizaciones. Se describen algunos casos de su utilización en el sector de la gestión de memoria oral, tanto nacionales como internacionales, entre los que se incluyen casos de un software derivado de *Dédalo*, *Numisdata*, para la gestión del patrimonio numismático digitalizado.

Palabras clave

Patrimonio cultural inmaterial; Memoria oral; Patrimonio numismático; Documentación audiovisual; *Media asset management*; MAM; Software; Humanidades digitales; *Dédalo*; *Numisdata*.

Abstract

This research aims to describe and assess the characteristics of *Dédalo*, a software for the management of audiovisual documentation, or media asset management (MAM), specialized in managing intangible cultural heritage or oral memory. An analysis of this software will not only help librarians, archivists and documentalists, historians, and anthropologists present their audiovisual collections, but also all kinds of professionals who manage audiovisual documentation from both private and public entities. This paper includes the use of MAM by the oral memory management sector, in both national and international terms, with particular mention of a software derived from *Dédalo*, *Numisdata*, for the management of digitized numismatic heritage.

Keywords

Intangible cultural heritage; Oral memory; Numismatic heritage; Audiovisual documentation; Media asset management; MAM; Software; Digital humanities; *Dédalo*; *Numisdata.*

Financiación

Este estudio ha sido realizado en el marco del grupo de investigación consolidado “Cultura i Continguts Digitals” (SGR 2017-422), financiado por la *Agència de Gestió d’Ajuts Universitaris i de Recerca* (*Agaur*) de la *Generalitat de Catalunya*. Es un resultado de los proyectos TIN2016-75850-R “Sistemas inteligentes de toma de decisiones y consenso en ambiente difuso: Aplicaciones en e-salud y e-comercio” y PID2019-103880RB-I00 “Sistemas de toma de decisiones en grupo disruptivos en ambiente difuso: aplicaciones en gestión inteligente de energía y empleados”.

Agradecimientos

A la empresa *Render* por responder a todas nuestras preguntas sobre su software. A los diversos responsables de los proyectos descritos por su amabilidad infinita.

1. Introducción

El patrimonio cultural inmaterial, al formar parte del patrimonio cultural, es defendido por la *Unesco* que lo define de esta manera en la *Convención para la Salvaguardia del Patrimonio Cultural Inmaterial* (*Unesco*, 2019):

> “Se entiende por ‹patrimonio cultural inmaterial› los usos, representaciones, expresiones, conocimientos y técnicas –junto con los instrumentos, objetos, artefactos y espacios culturales que les son inherentes– que las comunidades, los grupos y en algunos casos los individuos reconozcan como parte integrante de su patrimonio cultural”.

La importancia para la *Unesco* de este patrimonio se debe a que

> “es un importante factor del mantenimiento de la diversidad cultural frente a la creciente globalización. La comprensión del patrimonio cultural inmaterial de diferentes comunidades contribuye al diálogo entre culturas y promueve el respeto hacia otros modos de vida” (*Unesco*, 2019b).

El patrimonio inmaterial suele ser registrado a través de texto, audio y, cada vez más en los últimos años, de forma audiovisual. Es por ello por lo que este tipo de patrimonio, para ser gestionado eficientemente, necesita de un software que sea capaz de gestionar grabaciones audiovisuales, texto, audio y relacionar todos esos documentos a través de índices temáticos (*Dédalo*, 2019a).

Existen diversos términos para referirse a estos programas que gestionan imágenes en movimiento y activos multimedia (**Rodríguez-Mateos**, 2011): *enterprise content management* (ECM), *digital media management* (DMM), o *digital asset warehousing* (DAW). A esta investigación le parece más acertado el término MAM, que a su vez es una especialización de los más generalistas DAM (*digital asset management*) (**Cascón-Katchadourian**; **Ruiz-Rodríguez**; **Alberich-Pascual**, 2018).

La razón fundamental por la cual los profesionales que gestionan este tipo de documentación usan estos programas y no gestores de bases de datos generalistas, es que los MAMs hacen más fácil y centralizado el flujo de trabajo. Ello es fundamental en los procesos contemporáneos de gestión documental al permitir un significativo ahorro de tiempo, puesto que estos programas se integran sin grandes problemas en las propias organizaciones que los usan (**Jiménez-López**, 2003). Pero, además, se pueden destacar otra serie de ventajas, como son: reducción del tiempo de búsqueda, edición de materiales a gran velocidad, preparación de la documentación para ser difundida por el canal adecuado, control por parte de los usuarios de las versiones de un documento durante el proceso de edición (*Widen*, 2015), control de permisos de acceso al documento (acceso, visualizar, editar) y registro automático de dicho acceso.

Estos programas se han hecho tan necesarios debido al crecimiento exponencial de los archivos y contenidos multimedia (**Codina**; **Del-Valle-Palma**, 2001; **Caridad-Sebastián** *et al.*, 2011), lo que ha hecho que las instituciones se hayan visto abocadas a utilizarlos, muchas de ellas con colecciones con interés patrimonial (*Unesco*, 2011; **López-Yepes**, 2015) que deben ser digitalizadas para su preservación y mejor comunicación (**Agirreazaldegi-Berriozabal**, 2007; **Kurz** *et al.*, 2014). Además, las instituciones utilizan los MAM porque: a) facilitan y optimizan la captura y salvaguarda de la documentación analógica; b) procesan, tratan y gestionan adecuadamente dicha documentación; y c) recuperan la información para los usuarios de forma remota (**Lizarralde**, 2009).

Esta necesidad por parte de la sociedad de este tipo de programas ha llevado a la aparición de nuevos profesionales especializados en la gestión de documentos audiovisuales digitales (**Aguilar-Gutiérrez**; **López-De-Solís**, 2010) y de una larga serie de programas gestores de activos de medios o MAMs que permiten gestionar todo tipo de elementos audiovisuales y multimedia (**Codina**, 2000; *VSN*, 2015).

En la bibliografía especializada no existen apenas estudios que presenten una metodología para analizar o evaluar estos softwares, con la excepción de **Cascón-Katchadourian**, **Ruiz-Rodríguez** y **Alberich-Pascual** (2018). En consecuencia, elegir entre uno u otro MAM no es fácil. La elección va a depender de una serie de variables a tener en cuenta, como pueden ser: capacidad económica de la organización, tipo de fondos de la institución, el volumen de activos a gestionar, etc. (**Tansley**; **Smith**; **Walker**, 2005).

El objetivo de esta investigación es realizar un análisis en profundidad de uno de estos programas, *Dédalo*, valorando su funcionamiento y sus usos, así como los proyectos que lo han implementado. Este objetivo se justifica porque consideramos que un mejor conocimiento de este software puede ayudar a bibliotecarios, archiveros y documentalistas, pero también a toda clase de profesionales que gestionen documentación audiovisual, tanto de entes públicos como privados, a dar a conocer con éxito, de forma fácil y rápida, las colecciones audiovisuales de sus instituciones y organizaciones.

Dédalo fue creado por la empresa española *Render* con la colaboración del *Museu Valencià d'Etnologia* en 1998. Este museo decidió crear el *Arxiu de la Memòria Oral Valenciana-Museu de la Paraula*, donde se iban a realizar 3.000 entrevistas de entre 1 y 2 horas de duración para preservar la memoria oral de la sociedad tradicional valenciana. Por ello, *Dédalo* nació para un objetivo concreto, y se puede considerar un MAM especializado en la gestión del patrimonio cultural inmaterial desde su concepción, aunque, como veremos, luego haya evolucionado para gestionar otros tipos de fondos patrimoniales culturales. Asimismo, se puede añadir que *Dédalo* puede ser considerado también un CMS (*content management system*), una aplicación web, hasta tal punto llega la orientación del software hacia la publicación web de sus contenidos. Es por ello que en este trabajo lo situaremos en el contexto con otros softwares, entre ellos también con los CMS.

2. Metodología

Este estudio ha seguido la siguiente metodología dividida en fases:

La primera fase, de trabajo de campo y recogida de datos, se realizó entre los meses de noviembre de 2019 y enero de 2020, y constó de:

- Revisión de la bibliografía existente sobre el programa, muy escasa, así como de la relacionada con MAMs.
- Análisis de la información disponible en el sitio web de *Dédalo* sobre sus características y funciones.
- Análisis de la información disponible en la Web sobre los diversos proyectos que han utilizado *Dédalo*.
- Instalación, uso, análisis y valoración del programa con dos fines:
    a) Comprobación de las funciones.
    b) Comparación con otros sistemas de gestión de archivos audiovisuales MAM y con gestores de contenidos CMS generales u orientados a patrimonio. Respecto a los MAM, se han estudiado las principales mejoras del software respecto a un análisis previo comparativo de varios de estos sistemas (**Cascón-Katchadourian**; **Ruiz-Rodríguez**; **Alberich-Pascual**, 2018). Respecto a los CMS, se ha comparado con *WordPress*, *Drupal*, *Django*, *Arches*, *Museum Plus*, *Domus*, *Catalogit.*
- Consultas a la empresa *Render* y a las instituciones que usan este software.

La segunda fase, se inició temporalmente en paralelo al último periodo de recogida de datos en enero de 2020 y finalizó en ese mismo mes. Constó de:

- Selección de la muestra de proyectos a incluir en el estudio en función de su entidad e interés. Se ha pretendido ser inclusivos y añadir casi todos, manteniendo un equilibrio entre los proyectos nacionales e internacionales a destacar. Para cada proyecto se ofrece una breve explicación de porque ha sido escogido.
- Sistematización de los datos fundamentales a escoger sobre cada proyecto.
- Sistematización de los datos fundamentales a escoger sobre los softwares con los que se va a comparar a *Dédalo*.

3. Revisión de las características del software *Dédalo*

3.1. Características principales

Dédalo es una aplicación web compleja (modelo cliente-servidor) que tiene unas características específicas y que necesita una serie de requisitos. Pasamos a explicar las características más importantes extraídas de la propia página web del programa (*Dédalo*, 2019b) y de otras fuentes:

- Es una plataforma de desarrollo abierta (*open source*). En el año 2009 se estableció liberar el software con la licencia *GNU Affero General Public License v3.0*. Actualmente, *Dédalo* es un sistema de libre distribución y de código abierto. *https://github.com/renderpci/dedalo/blob/master/License.md*
- Es una aplicación web basada en estándares abiertos (HTML, CSS, Javascript, PHP, PostgreSQL y MySQL). El servidor web que necesita *Dédalo* precisa tener configurado, al menos, las siguientes versiones de estos programas de código abierto (*Dédalo*, 2019c): *Apache* 2.4, PHP 7.1+, MySQL 5.6, PostgreSQL 10.1+
- Permite la gestión de texto, imágenes y material audiovisual. Además, posibilita esta gestión sin que pueda haber destrucción accidental al conservar los cambios que se realizan dentro de los datos.
- Tiene una estructura de trabajo multiusuario, multitesauro, multilenguaje y multiproyecto. Estos rasgos facilitan la creación de una gestión documental colaborativa; de esta manera diferentes profesionales pueden hacer un tratamiento documental y compartirlo introduciéndolo en el sistema (*Dédalo*, 2019b).
- Permite un flujo de procesos de trabajo secuencial acumulativo: consta de flujos de trabajo claramente definidos que pueden ser asignados a investigadores o personal especializado, estos procesos son independientes y generalmente secuenciales. (**Cascón-Katchadourian**; **Ruiz-Rodríguez**; **Alberich-Pascual**, 2018).

- Tiene potentes herramientas de marcado y recuperación: Es un software muy eficiente que es capaz de localizar y editar en tiempo real un fragmento de 30 seg. relacionado con un tema dentro de una entrevista de 90 min. (*Dédalo*, 2019a; **Morote-Magán**; **Labrador-Piquer**, 2013).
- La arquitectura de almacenamiento es segura: combina arquitecturas cliente/servidor y navegador web, es un sistema flexible, extensible y escalable, lo cual permite su integración con sistemas preexistentes (**Cascón-Katchadourian**; **Alberich-Pascual**; **Ruiz-Rodríguez**, 2018).
- Tiene control de acceso y gestión de permisos, algo fundamental para las instituciones públicas con las que trabajan, que son bastantes estrictas en ese sentido. Posee un módulo de administración de usuarios bastante completo donde se pueden ver los perfiles de usuarios, el control de acceso y el histórico de acciones.

3.2. Usos de *Dédalo*

Como se puede consultar en su web (*Dédalo*, 2019a), cualquier persona que tenga un buen número de materiales en audio o vídeo, como, por ejemplo, entrevistas o canciones, puede encontrar en *Dédalo* una solución para ordenar, catalogar y recuperar información desde diversos formatos. Sin embargo, hasta ahora han sido museos, bibliotecas, archivos, fundaciones, asociaciones y otras instituciones culturales, las organizaciones que, como veremos posteriormente, están utilizando fundamentalmente este software. Estas entidades lo usan para:

- Gestionar, conservar e investigar con material audiovisual, como soporte de la historia/memoria oral o patrimonio inmaterial, para difundirlo y publicarlo en la web. Se puede destacar del programa la relación que hace entre los recursos multimedia y el texto, es decir, entre las transcripciones y las grabaciones, lo que permite no tener que buscar y localizar manualmente dentro de las entrevistas fragmentos o secciones significativas; los tesauros jerárquicos, integrados y normalizados, que son de gran ayuda para la catalogación y la recuperación normalizada de la información; la filosofía de código abierto, lo cual le da la flexibilidad necesaria para ser adaptado a diversos proyectos y asegura el acceso a los fundamentos tecnológicos que sustentan la aplicación, haciendo que cualquier desarrollador pueda editar, modificar y adaptar el código, asegurando la preservación del patrimonio gestionado; plataforma multilenguaje, lo cual facilita labores rutinarias de traducción; la seguridad del programa, importante para proyectos que suelen ser colaborativos al evitar la pérdida de datos, pues guarda las versiones precedentes que son recuperables por los conservadores.
- Gestionar y conservar las digitalizaciones de patrimonio numismático para difundirlo y publicarlo en la web, siendo muy útiles de lo anteriormente dicho: los tesauros, el ser de código abierto, la plataforma multilenguaje y la seguridad del programa. Además, para este patrimonio se han creado herramientas específicas como la construcción de leyendas monetarias antiguas mezclando dibujos SVGs tesaurizados y caracteres Unicode que permiten describir alfabetos paleohispánicos.
- Gestionar y conservar otros tipos de Patrimonio Cultural Material como son el arqueológico y etnológico.

4. Funcionamiento

4.1. Historia y evolución de *Dédalo*

Como se ha señalado antes, *Dédalo* nació con un objetivo concreto: gestionar el patrimonio inmaterial. Surgió en 1998 de la colaboración entre la empresa *Render* (figura 1) con el *Museu Valencià d'Etnologia* donde comenzó el proyecto de investigación sobre Memòria Oral Valenciana (*Museu de la Paraula*) impulsado por su director de entonces, Enrique Pérez Cañamares (*Dédalo*, 2019a). Tras dos años de desarrollo, en el año 2000 se presentó al público la primera versión de *Dédalo* que ya se fundamentaba en las tecnologías de transmisión de materiales audiovisuales por Internet, muy incipiente por aquella época.

En los años siguientes se produjo una paulatina liberalización del software. Aunque las versiones se solapan ligeramente, en 2003-2004 se lanza la versión 2 donde se empiezan a implantar las primeras versiones con tecnologías de código abierto: Apache, MySQL, PHP, etc. En 2008-2009 ve la luz la versión 3 donde directamente se abre el código fuente del proyecto con el objetivo de que cualquier institución o particular pueda gestionar este tipo de patrimonio (*Equipo de desarrollo de Dédalo*, 2014).

La versión 4 llega a partir del año 2011, donde se produce una reinvención del software, reescribiendo el programa desde la base en lo que se refiere al modelo de catalogación y análisis. Esto hace que se redefina la plataforma para que se

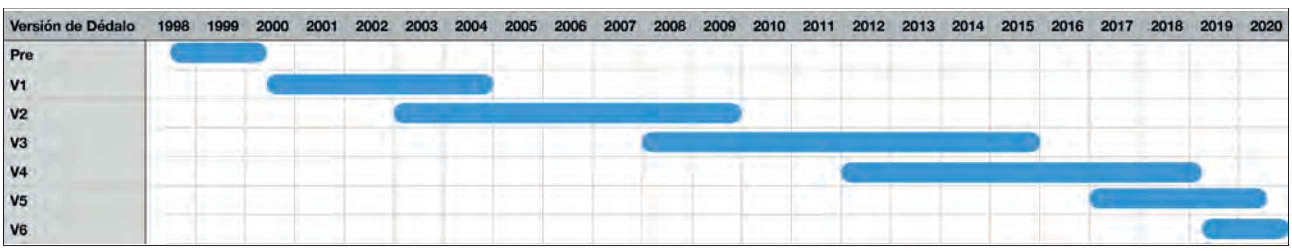


Figura 1. Evolución de las versiones de *Dédalo*. Fuente: *Render Comunicación SL*.

gestione cualquier tipo de patrimonio cultural (natural, material e inmaterial) (*Equipo de desarrollo de Dédalo*, 2014). El cambio más importante corresponde a la indexación de los contenidos y a la relación y conexión que existe entre ellos, los recursos (fotografías, audiovisuales, publicaciones…) y las conexiones con el tesauro, otros bienes patrimoniales y las entrevistas (**Peña-Carbonell**, 2016).

En 2017 se implementó la versión 5 con un nuevo buscador y exportador. Se implementaron muchas herramientas de usabilidad y se comenzó con el proyecto de diseñar modelos para analizar casos concretos como el patrimonio numismático, analizar / interpretar el alfabeto ibero y para patrimonio etnológico.

A finales de 2019, el equipo de desarrollo está en pleno cambio a la versión 6 en la que el software se está reescribiendo en un 50-60% y se está modernizando la interfaz. En este caso no se está tocando la arquitectura de base sino el modelo de interacción con la aplicación (lo que ocurre en el lado cliente - navegador). La intención es que la nueva versión se publique a mediados de 2020.

4.2. Instalación

Aunque *Dédalo*, o las versiones que han evolucionado a raíz de *Dédalo*, se usan para gestionar distintos tipos de patrimonio, en este apartado vamos a desarrollar el funcionamiento de *Dédalo* cuando gestiona historia o memoria oral.

Al instalar el programa por primera vez, el software pide que se cree un "superusuario", que es el que tiene labores de desarrollo y programación, pero para el gestor o coordinador del proyecto hay que crear un usuario de nivel 9. El programa viene con una serie de niveles que permiten a los distintos colaboradores o usuarios del proyecto realizar más o menos funciones (*Dédalo*, 2019e). En este estudio valoramos muy positivamente este aspecto debido a la gran flexibilidad de opciones que ofrece para grandes compañías que quieran trabajar con él, con diversos tipos de usuarios con diversos permisos.

El segundo paso es crear un proyecto; estos ordenan los catálogos y permiten la edición de parte de los contenidos por los responsables o usuarios de proyecto. Un usuario de un proyecto no puede ver ni editar los contenidos de otros. Los proyectos son, por tanto, esenciales para gestionar equipos de trabajo diferentes. Crear uno es un paso obligatorio y *Dédalo* permite crear varios simultáneamente.

El proceso de trabajo se realiza de forma secuencial, acumulativa y en un determinado orden. Eso hace que las captaciones o grabaciones pasen por una serie de estados, que el usuario les asigna según ha pasado por los módulos de trabajo. Siempre es posible volver atrás, pero esta estructura da una gran seguridad y puede funcionar con alertas a otros usuarios, de esta manera un equipo especializado o departamento se puede coordinar para realizar cada uno una labor. Los estados son:

- grabada: se ha realizado la captación y la digitalización del material;
- transcrita: se ha completado el proceso de transcripción;
- indexada: la captación se ha indexado y está lista para revisarse;
- consultable: ha terminado el proceso;
- anulada: la captación ha sido cancelada.

Para poder acceder al siguiente módulo el usuario tiene que cambiar el estado.

4.3. Proceso de trabajo

Dédalo "consta de 5 módulos de trabajo: Captación, Transcripción, Tesauro, Indexación y Búsqueda. Además, incorpora un módulo de administración de proyectos, usuarios y estadísticas" (*Dédalo*, 2019d).

Una vez creado el proyecto, es el momento de agregarle captaciones. Cuando hablamos de historia oral, por ejemplo, damos por hecho que hay que registrar esa historia en un soporte para reproducirla en otro momento y esto se puede hacer en formato sonoro o audiovisual. Cada captación tiene unos protagonistas, unos informantes y también puede tener uno o varios soportes de grabación. En este proceso hay un gran número de campos del registro que podemos rellenar; sin embargo, los obligatorios son: Código de captación, Estado, Proyecto y Municipio. Todas las captaciones tienen un código alfanumérico que se elige libremente, un proyecto al que están adscritos y un municipio donde se grabaron. Igualmente, según en qué situación esté en el momento del proceso de trabajo tendrá un estado u otro como dijimos anteriormente (*Dédalo*, 2019f).

Una vez que el documento audiovisual ha sido captado y registrado por el sistema, llega el momento de transcribirlo o convertirlo al formato textual (figura 2). Se trata de un proceso muy laborioso pero imprescindible; sin esa conversión a texto del documento audiovisual no podríamos realizar la indización, búsqueda y por tanto la recuperación de la información (*Dédalo*, 2019g).

Aunque en *Dédalo* existen 3 formas diferentes de realizar la transcripción: audiovisual, textual y audio, nos centraremos en las dos primeras. El audiovisual es el más completo y es el normalmente usado en el primer contacto con la grabación. La ventana del programa está dividida en dos zonas, el documento audiovisual y una zona para el texto. A sabiendas de lo tedioso que es transcribir, *Dédalo* da muchas facilidades para ello a través de atajos de teclado para evitar el uso del ratón, usar la tecla de *escape* para pausar, reanudar o volver 3 segundos atrás, etc. (*Dédalo*, 2019g). Consideramos que,

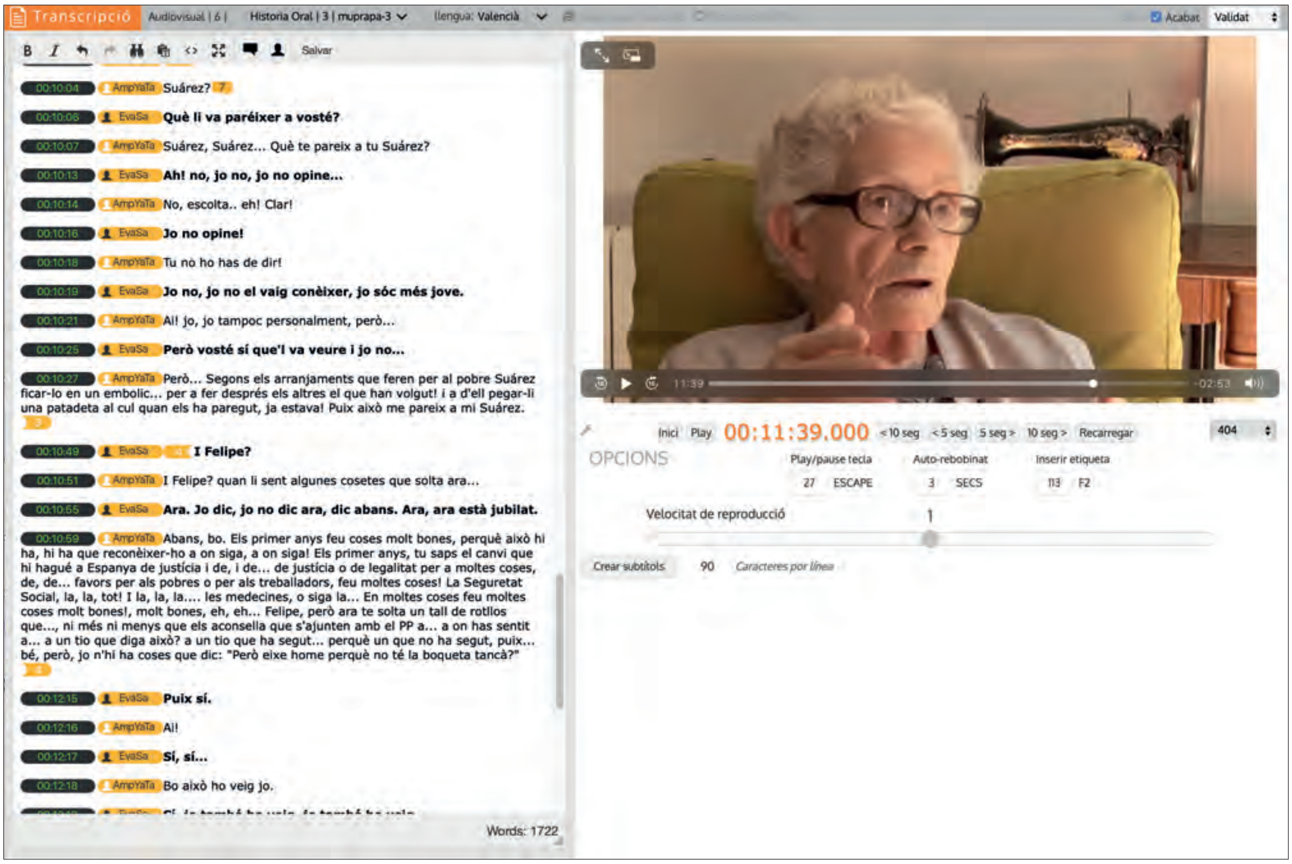


Figura 2. Ejemplo de cómo se transcribe un documento con *Dédalo*. Fuente: *Ayuntamiento de Paiporta*, Valencia (2019).

sin duda, uno de los puntos fuertes del software es la facilidad de transcripción. Estos pequeños detalles hacen que el trabajo en masa se haga más eficientemente con este software. De hecho, son estas tecnologías las que están posibilitando que se hagan este tipo de proyectos.

El formato de transcripción textual sirve para revisar la ortografía o editar el contenido; se suele usar por tanto en segundo lugar para mejorar la primera transcripción, en este modo sólo se ve el texto, la pantalla no está dividida. Cabe destacar que para facilitar la tarea posee herramientas para permitir copiar y pegar desde *Word* así como iconos parecidos al famoso procesador de textos.

Una segunda fase de la transcripción dentro de *Dédalo* es el marcado o relación del texto con el contenido audiovisual. Este marcado depende del contenido que vayamos a transcribir (entrevista, acto festivo, ritual, etc.); esto se hace a través de los códigos de tiempo, que son los que permiten al sistema relacionar un determinado fragmento de texto con su correspondiente fragmento audiovisual (*Dédalo*, 2019g).

Una vez transcrito un documento, el siguiente módulo es el del Tesauro (figura 3). El programa permite la construcción de un tesauro para la posterior indexación con las clásicas relaciones jerárquicas, de equivalencia y asociativas. Además, permite manejar varios tesauros; de hecho, por defecto crean el tesauro temático, onomástico y cronológico que son desarrollados por el usuario y el toponímico normalizado y con posibilidad de incorporar 146 países con sus estructuras administrativas. En el caso de España, el tesauro topónimo de *Dédalo* contiene alrededor de 75.000 descriptores toponímicos normalizados; en total la incorporación de los 146 países genera 2.189.232 términos normalizados. Por otro lado, el tesauro de lenguajes permite que *Dédalo* pueda ser utilizado para trabajar en cualquier lengua. Si se va a usar el mismo tesauro para varias captaciones (sería lo más común), una vez creado, el paso por este módulo de los documentos sería testimonial. En cualquier momento de la transcripción o de la indexación se puede ir hacia adelante o hacia atrás y añadir términos nuevos al tesauro; una vez añadidos aparecerán disponibles para la indexación.

Al ser multilenguaje (figura 4), se pueden usar varios idiomas para las traducciones del tesauro. En el momento de la instalación del programa nos preguntará qué lengua queremos como la principal y no hay límite para las secundarias (*Dédalo*, 2019h). Consideramos que el tesauro de *Dédalo* es uno de los puntos fuertes del programa; por ello le dedica un módulo propio y es obligatoria la indización a través de él.

Por último, la indexación es el último proceso de trabajo antes de publicar una captación y consiste en poner en relación el texto transcrito con el lenguaje controlado del tesauro (*Dédalo*, 2019d). Ello se hace para guiar al usuario y para que la recuperación de la información se realice ordenadamente. Esta recuperación se hace desde un enfoque concreto que habremos definido al elaborar el tesauro (*Dédalo*, 2019i).

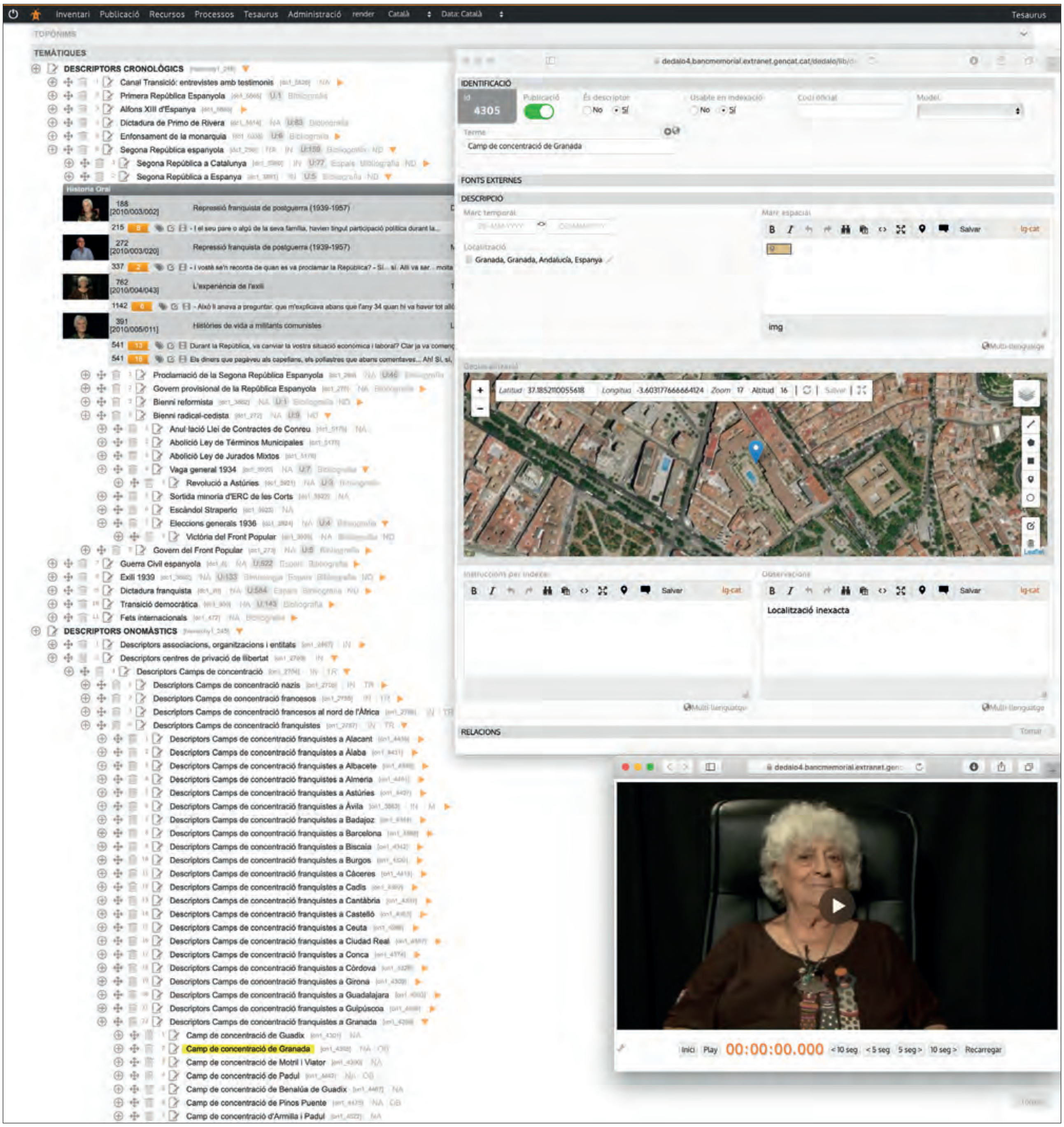


Figura 3. Ejemplo del funcionamiento interno del tesauro de *Dédalo*. Fuente: *Memorial Democràtic*.

Este módulo consta de dos partes: “en proceso”, que quiere decir que la captación todavía no tiene indexaciones o que se están indexando en ese momento; y “fragmentos indexados”, se refiere a los fragmentos de la captación que ya han sido indexados y, por tanto, ya tienen entidad propia (*Dédalo*, 2019i). De todo ello se infiere que una captación puede tener varios fragmentos indexados; cada uno de esos fragmentos puede ser recuperado independientemente, sin tener que visualizar la entrevista completa.

Indexar un documento es un proceso sencillo que consta de tres partes: primero se selecciona el fragmento de texto que tiene un significado propio para el investigador; en segundo lugar, se pincha en crear fragmento, lo cual supone que internamente el programa crea las marcas de [index_000_in] y [out_index_000] y entre medias el texto indexado (*Dédalo*, 2019d), ello se hace insertando etiquetas XML en el texto de la transcripción; por último, se asignan los descriptores para el texto indexado sacados del tesauro (*Dédalo*, 2019i).

Una vez realizado este proceso, el documento queda en estado consultable. Es un sistema sencillo a la par que ingenioso, que facilita mucho esta labor ardua y complicada respecto a otros sistemas encontrados. Aunque se están dando avances en la indización automatizada a través de la inteligencia artificial, estos sistemas no están maduros hoy en día, tampoco en la transcripción automática o creación de subtítulos mediante tecnología de reconocimiento de voz

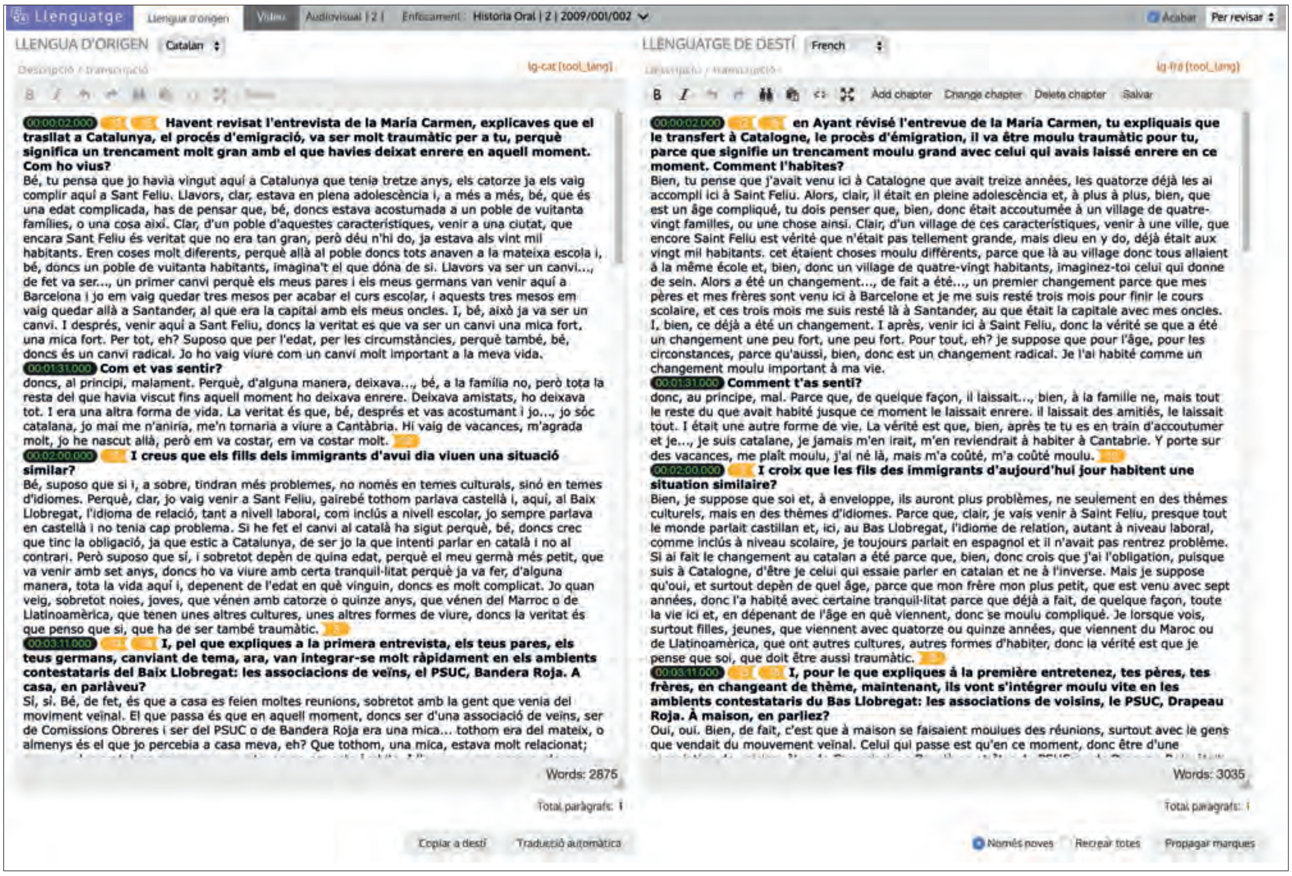


Figura 4. Ejemplo de traducción de las transcripciones, *Dédalo* es multilenguaje. Fuente: *Memorial Democràtic*.

(**Caldera-Serrano**, 2013). A partir de aquí se realiza la publicación en la web (figuras 5 y 6). Es un proceso estandarizado tecnológicamente hablando, pero sin un diseño marcado, puesto que cada institución adapta a sus colores corporativos, logos, forma de visualizar, recorridos temáticos y búsqueda de las colecciones las webs resultantes. *Dédalo* dispone de ciertas plantillas para servir de marco en la publicación de los documentos, pero estas se pueden utilizar o no.

Hay que destacar, por otro lado, que *Dédalo* sólo funciona online (salvo que se guarden los documentos en un servidor local) y que funciona en dinámico; por tanto, cada vez que un usuario quiere ver un documento, técnicamente está mandando una petición al servidor, que se la sirve en décimas de segundo.

5. Ejemplos de uso en organizaciones

Aunque *Dédalo* es un programa flexible que se adapta a cada proyecto, hay transformaciones del programa más profundas y que definitivamente se convierten en versiones del programa original. Hasta el momento, los usos que hemos documentado del programa son la gestión de la documentación audiovisual y la gestión del patrimonio numismático; ello da lugar a dos "programas" diferenciados, uno es el propio *Dédalo* y el segundo, *Numisdata*. En este apartado mostraremos los proyectos nacionales e internacionales que usan en primer lugar *Dédalo* y a continuación veremos los que usan *Numisdata*.

5.1. Ejemplos de uso de *Dédalo*

Los siguientes proyectos, entre otros, usan *Dédalo* para la gestión de su archivo:

5.1.1. Españoles

Arxiu de la Memòria Oral Valenciana-Museu de la Paraula

Es un proyecto de investigación "socioantropológica" que emprendió el *Museu Valencià d'Etnologia* a través de su *Servicio de Investigación en Etnología y Cultura Tradicional* en el año 1999, para gestionar, analizar y recuperar los testimonios de los valencianos y valencianas nacidos en la primera mitad del siglo XX que el *Museu Valencià d'Etnologia* conserva en sus fondos. Es, por tanto, un espacio virtual completamente digitalizado. Este proyecto estuvo vinculado con diversas instituciones valencianas y departamentos de la *Universitat de València* (*Museu de la Paraula. Archivo de la Memoria Oral Valenciana*, 2019); actualmente está vinculado con la *Acadèmia Valenciana de la Llengua*.

El *Museu de la Paraula* custodia 400 entrevistas en formato digital y audiovisual, habiéndose realizado la primera de ellas en el año 2002, estando todas ellas transcritas e indexadas y, a partir de 2011, publicadas en la web. En dichas entrevistas salen personas que han nacido antes de la guerra civil española, las cuales se considera que son unos excelentes

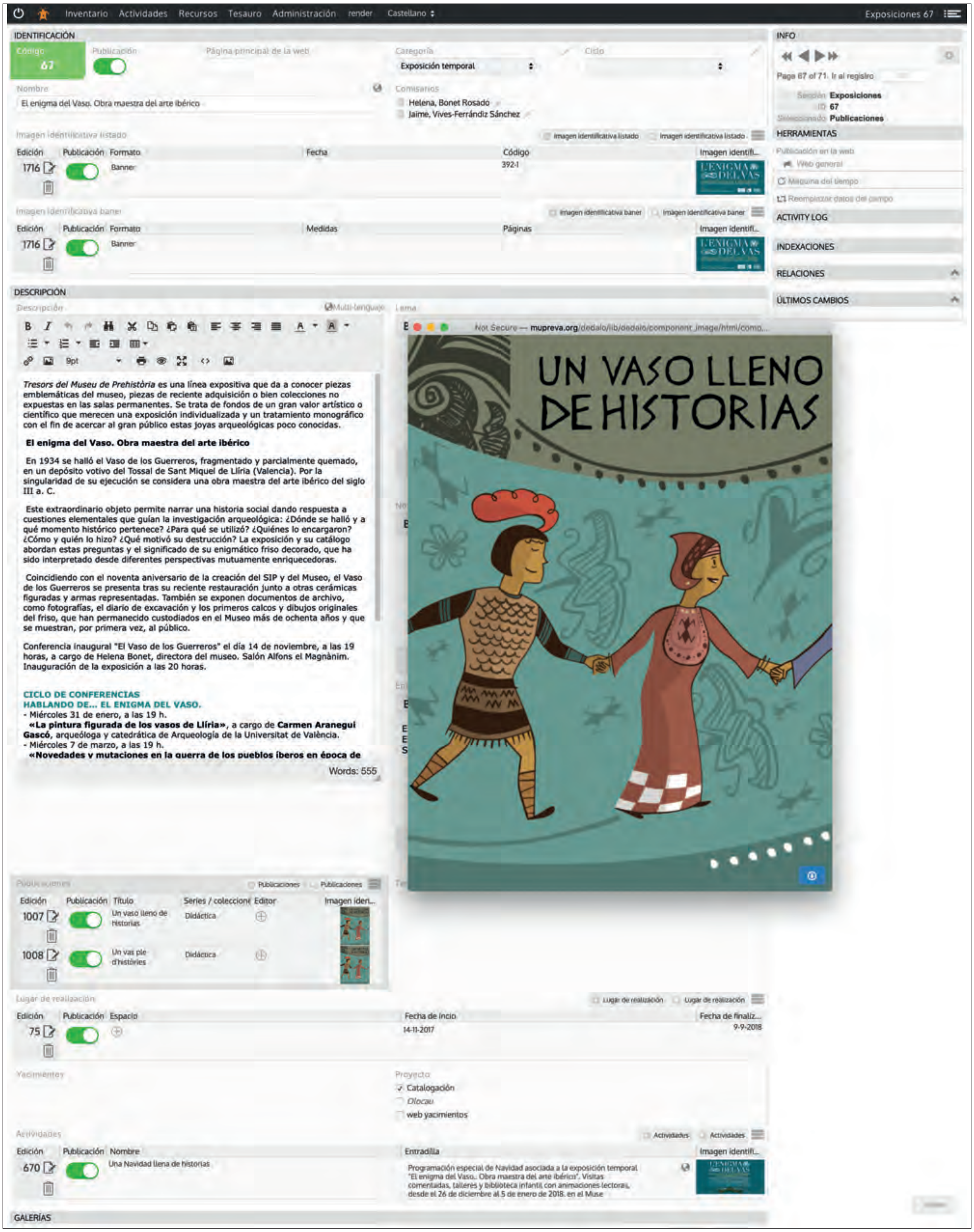


Figura 5. Control de publicaciones. Fuente: *Museu de Prehistòria de València*.

testigos de los cambios históricos y socioculturales (*Museu de la Paraula*, *Archivo de la Memoria Oral Valenciana*, 2019), aunque actualmente, debido al paso del tiempo, el corte se ha establecido en mayores de 75 años.

La importancia de este proyecto y su relación con *Dédalo* se debe a que nacieron al mismo tiempo, eran parte del mismo proyecto. Por su envergadura y características es pionero en España, es por ello por lo que lo hemos incluido en primer lugar en nuestra muestra de ejemplos de uso. *Dédalo* se gestó a partir de las necesidades técnicas que iban surgiendo en el proceso de gestión, transcripción y análisis de las entrevistas. Eran los requerimientos técnicos vistos por el equipo de investigación del *Arxiu de la Memòria Oral Valenciana-Museu de la Paraula* los que definían las necesidades del sistema.

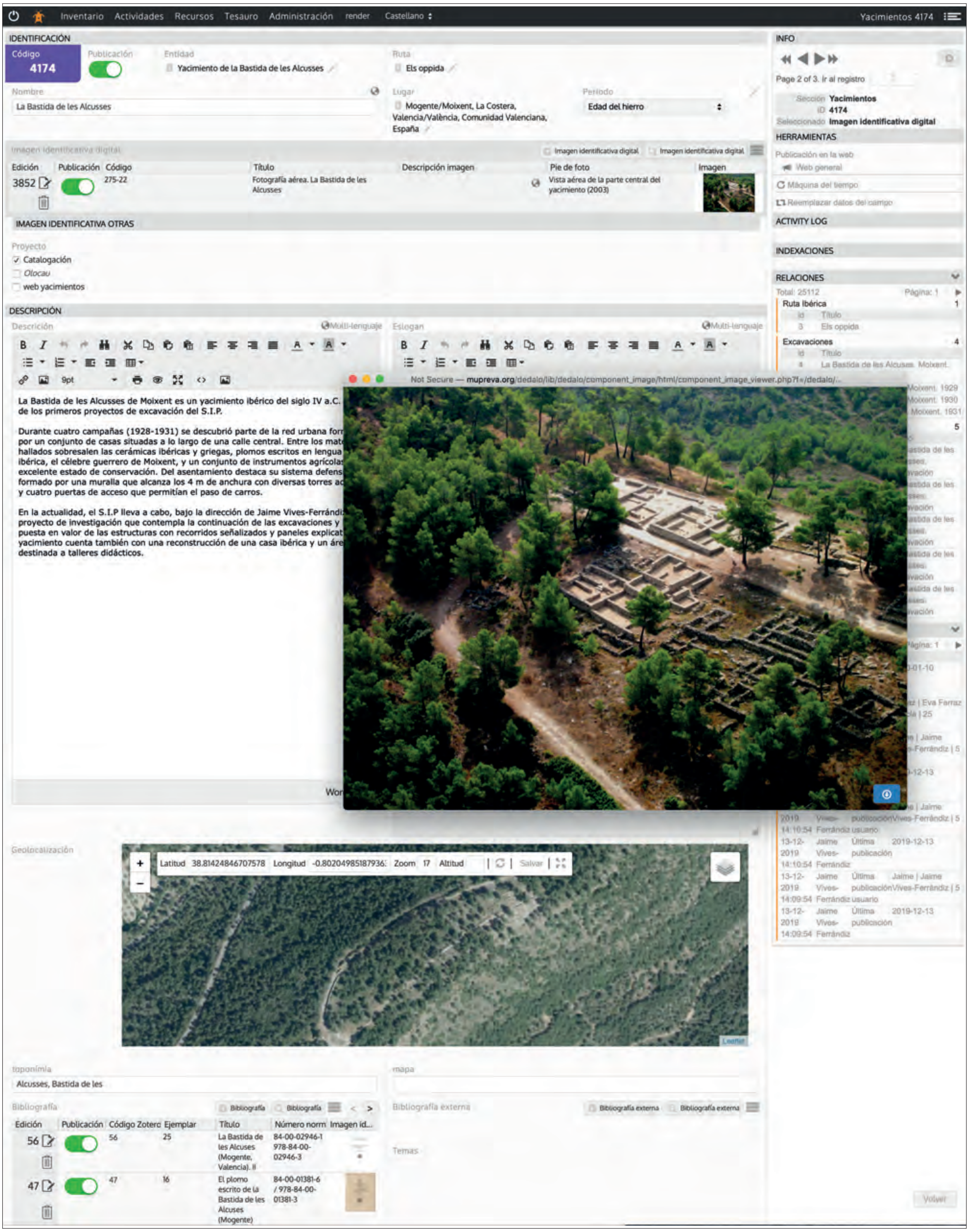


Figura 6. Ejemplo del control de publicaciones de un yacimiento georreferenciado. Fuente: *Museu de Prehistòria de València*.

Posteriormente, los trabajos de indexación y la creación de descriptores fueron los que definieron la creación de un tesauro incluido en el sistema para poder gestionar el ingente corpus de textos, audios e imágenes. A raíz de este proyecto, como luego iremos desgranando, surgieron otros que están fuertemente influenciados por el *Arxiu de la Memòria Oral Valenciana-Museu de la Paraula* y vieron en él una fuente de inspiración.

Técnicamente está compuesto de dos plataformas, una privada o intranet donde los responsables del *Museu* catalogan y administran los fondos y otra pública que funciona como sistema de consulta (*Equipo de desarrollo de Dédalo*, 2014). Tiene multitud de formas de búsqueda: en inicio salen las entrevistas en random por una temática concreta; posee búsqueda simple y avanzada, pudiendo buscar en esta última por proyecto, idioma, sexo del entrevistado, año de nacimiento del entrevistado, así como municipio, comarca y descriptor; navegación temática que funciona como un tesauro jerárquico y por último la opción rostros, donde se pueden ver los rostros de los 332 entrevistados en este proyecto, pinchando en cualquiera de ellos.

Por último, hay que destacar que el proyecto sólo en sus tres primeros años de vida tuvo una media de 13.474 visitas anuales; 8.364 usuarios únicos al mes y un total de 65.703 páginas visitadas mensualmente (*Equipo de desarrollo de Dédalo*, 2014).

***Museu de Prehistòria de València* (*MPV*)**

Se fundó en el año 1927, dependiente del *Servicio de Investigación Prehistórica* (*SIP*) de la *Diputación Provincial de Valencia*, que nació con el objetivo de realizar excavaciones y estudios sobre la arqueología valenciana, difundir los resultados, ser el archivo documental de referencia y el depositario de los materiales arqueológicos aportados por los trabajos de investigación (**Sánchez** *et al.*, 2018).

La institución genera un notable volumen de documentación que hay que gestionar debidamente (**Sánchez** *et al.*, 2018). En su historia ha pasado por los inventarios y catálogos sobre papel; en 1989 comienza la gestión digital sobre sistema operativo *MS-DOS* y el software *Sigma* y *RSigma*. En 1999 se adoptó *Filemaker*, un sistema cuya complejidad crecería de forma progresiva y que finalmente conduciría a una migración a *Dédalo* en los años 2015-2017. En el momento de la implantación de *Dédalo* el museo estaba buscando un sistema de gestión patrimonial integral que conectase con la página web para lo que sacó un concurso público. El objetivo era unificar el sistema de gestión interno con el sistema de gestión de contenidos de la web que había crecido notablemente y duplicaba las fichas del sistema interno. Además, se necesitaba un software que permitiera ampliar contenidos y funcionalidades, fundamentalmente en relación con la gestión de numerosos recursos multimedia y del multilingüismo.

El contrato se lo adjudicó la empresa *Render* en octubre de 2014 y a partir de entonces se comenzaría a configurar una instalación del programa *Dédalo* adaptada a los contenidos del *Museu*. Hay que destacar la influencia de este proyecto en el software en cuanto a las sucesivas mejoras que se implementaron y que lo fueron transformando. La historia de *Dédalo* pasa por dos fases dentro del museo. La primera es la transición de *FileMaker* a *Dédalo* y la segunda es la adopción de *Dédalo* como gestor único. La primera fase pasó por trabajar con dos entornos de trabajo conectados, de tal forma que se consiguieron dos de los objetivos fundamentales de aquel momento: mantener el entorno local de trabajo y permitir que *Dédalo* realizase la publicación web.

A mediados de 2017 se tomó la decisión de abandonar *FileMaker* y que *Dédalo* se convirtiese en el sistema único de gestión, aprovechando que los servidores de la *Diputación de Valencia* tenían que ser renovados (**Sánchez** *et al.*, 2018). Se tuvo que realizar una migración compleja e integral de datos desde *FileMaker* a *Dédalo* que finalizó en noviembre de 2017. Los responsables del *MPV* destacan de *Dédalo* su mejor relación con la gestión de los recursos multimedia, principalmente imágenes y pdfs; sus tesauros geográficos jerárquicos y normalizados asociados a una georreferenciación para una mejor gestión de la colección arqueológica del *MPV*; la importación de imágenes masivamente y con opción de asociarlas a fichas concretas; la gestión de vídeos y audios de conferencias y reuniones, cuyos fragmentos se pueden indexar y enlazar selectivamente con cualquier registro del sistema; asimismo, permite a los usuarios de la web la búsqueda dentro de los textos del gran fondo de publicaciones en pdf de temática arqueológica.

Banco Audiovisual de Testimonios o Banco audiovisual de la Memoria Democrática

Es el archivo de historia oral del *Memorial Democrático*, una institución dependiente de la *Generalitat de Catalunya* que tiene entre sus prioridades la preservación de la memoria de lo acaecido en el territorio entre 1931 (proclamación de la Segunda República) y 1980 (primeras elecciones democráticas) (**Corbella-López**, s.f).

Este proyecto nació en 2008, cuando se encargó un estudio para la creación de este archivo de testigos, en el que participan historiadores y periodistas. En el mismo se decía que deben integrar proyectos de investigación en fuentes orales sobre memoria política, realizar entrevistas y promover el uso del formato audiovisual, utilizar un tesauro para la recuperación de información y hacer un uso intensivo de las nuevas tecnologías. Entre el año 2009 y 2010 se realizó un gran número de entrevistas que son un porcentaje muy alto del total de entrevistas que posee, ya que se trata de un archivo vivo que en el año 2014 poseía 11,5 millones de palabras, y sus entrevistas se indizan mediante un tesauro de 77.892 términos. Hay que destacar que el memorial es el segundo archivo de memoria oral más grande de Europa, razón por la cual lo hemos incluido en la muestra y que muestra la capacidad de uso de *Dédalo* en un proyecto de grandes dimensiones. Al mismo tiempo que se realizaban estas entrevistas se crearon las bases de datos y los tesauros para la gestión de contenidos.

Tras consultar diversas aplicaciones informáticas para la gestión de archivos audiovisuales, se optó por *Dédalo* ya que éste se había desarrollado con el *Museu Valencià d'Etnologia* en un proyecto que se podía identificar como similar. Además, *Dédalo* se adaptaba al proyecto y no al revés, como ocurría con un buen número de softwares propietarios (*Equipo de desarrollo de Dédalo*, 2014). Este proyecto destaca de *Dédalo* que permite realizar un trabajo muy metódico que pasa por varias fases. De entre ellas destacan sobre todo dos características que, a su juicio, son las principales aportaciones de *Dédalo* a los archivos de historia oral. Por un lado, la relación texto-vídeo, es decir la relación que existe entre las transcripciones de las entrevistas y las grabaciones de los testigos, todo ello a través de la inserción de los códigos de tiempo. Por otro lado, la catalogación de contenidos a través de tesauro para indizar las entrevistas de forma integrada a partir de las transcripciones de las mismas; ello permite que a posteriori pueda ser visionado por los usuarios solo el fragmento del vídeo que les interesa.

Además, ven muy interesante cómo se realiza la ingesta de entrevistas de vídeo, así como la transcripción de las mismas y su relación con otros registros de la base de datos; que pueden tener la plataforma instalada en su propio servidor, pudiendo realizar copias de seguridad y teniendo el control total del mismo; que sea multiusuario y que sea de software libre.

Hay que señalar también que la utilización de *Dédalo* conlleva unificar los criterios técnicos de las entrevistas y el que sea obligatorio su transcripción, así como la elaboración del ya comentado tesauro (**Guixé**, 2017).

Mujer y Memoria

Es un espacio digital creado para albergar proyectos que recuperen y difundan la memoria histórica de las mujeres españolas del siglo XX (*Mujer y Memoria*, 2019). Este espacio digital existe por la participación desinteresada de diversas instituciones y equipos de trabajo, entre otros *Render*, creador de *Dédalo* a través del trabajo técnico y de asesoría. También han participado la *Professional Staff Congress* y la *City University of New York (CUNY)* a través de una beca para financiar las transcripciones y otros aspectos del proyecto, la *Queensborough Community College* otorgándole un año sabático a la directora del proyecto Aránzazu Borrachero Mendívil, el *Archivo Regional de la Comunidad de Madrid* y el *Archivo Histórico de la Fundación Largo Caballero* por poner a su disposición los fondos fotográficos y un largo etc. de colaboradores puntuales (*Mujer y Memoria*, 2019b).

En este espacio digital conviven dos proyectos: *Madres e hijas de la transición española* y *Maternidades robadas*. Se han incluido en la muestra analizada estos proyectos por su singularidad y por su actualidad en nuestros días. El primero consiste en entrevistas que hacen hijas cuyas vidas han transcurrido durante la transición y la democracia, a madres que se hicieron adultas y madres durante el franquismo, recordando vivencias, cambios acaecidos en este tiempo y comparando vidas de ambas generaciones (*Mujer y Memoria*, 2019).

Para este primer proyecto el espacio digital técnicamente permite que los visitantes puedan ver las entrevistas por temáticas, hacer búsquedas libres por palabras o ver las entrevistas completas en la sección "Cronología". Si están viendo un extracto de un vídeo, debajo siempre tienen la opción de ver la entrevista completa y observar en descriptores los temas que contiene la entrevista. Además, se puede acceder también a las transcripciones y resúmenes de las entrevistas. Se trata de un proyecto que actualmente sigue abierto.

El segundo proyecto dentro del espacio digital es *Maternidades robadas*,

> "un archivo que recopila testimonios de algunas de las víctimas de estas desapariciones junto con la documentación que ellas mismas han recabado con gran esfuerzo personal y económico" (*Mujer y Memoria*, 2019c).

Es un proyecto que actualmente (2020) está abierto y por tanto sigue recibiendo más casos.

En este portal se muestran por el momento 12 casos de personas que han padecido el robo de un bebé. El espacio digital se muestra con las 12 fotografías de estas personas sentadas. Una vez se entra en cualquiera de ellas aparece un pequeño resumen de la persona y su caso. Lo más interesante es la serie de apartados en los que se divide su caso, por ejemplo: embarazo, nacimiento, presunta defunción, denuncias, exhumación, pruebas de ADN, etc. Cada uno de estos apartados está compuesto por varios vídeos con fragmentos de la entrevista a la persona. A la vez se expone la digitalización de los documentos que se han ido recopilando como pruebas. Es, sin duda, una manera original y muy detallada de presentar los casos, que necesita de un programa como *Dédalo* para gestionarlos.

Tanto para un proyecto como para el otro el objetivo era llegar a un público amplio, no sólo al académico; para ello se busca un programa que gestione no solo documentos escritos o archivos de voz, como se ha visto en otras instituciones, sino también documentos audiovisuales (*Equipo de desarrollo de Dédalo*, 2014).

De nuevo el *Museu de la Paraula* desarrollado por el *Museo de Etnología* fue el puente entre esta institución y *Dédalo*, al ver que se trataba de un proyecto parecido. Como se ha indicado, es de nuevo la versatilidad de *Dédalo* la que convence al equipo de *Mujer y Memoria*: difusión de contenidos audiovisuales a través de la web, transcripción dentro de la plataforma, creación de un tesauro para la indexación y la traducción a varios idiomas, así como la filosofía de código abierto del programa (*Equipo de desarrollo de Dédalo*, 2014).

5.1.2. Internacionales

Heraclitus Research Vessel (Memoria Oral Pescadores del Mediterráneo)

Este curioso y romántico proyecto internacional (*Heraclitus Research Vessel*, 2019a) es tan interesante como poca documentación hay sobre el mismo. El *Institute of Ecotechnics* (2019a) construyó hace 40 años un buque de investigación denominado Heraclitus, que desde entonces ha realizado doce expediciones por los océanos del mundo. Este buque, además de realizar diversas investigaciones sobre la conservación de los mares con el fin de proteger los ecosistemas y la biodiversidad, documentar el declive de los océanos, la acidificación, el aumento del nivel del mar, la contaminación plástica y la sobrepesca, también quiere documentar la historia oral de las culturas costeras y sus vivencias como máximos afectados por esta situación (*Institute of Ecotechnics*, 2019b).

Este proyecto, que depende de financiación externa, está en proceso de indexar, catalogar y transcribir una serie de entrevistas que se han ido realizando a lo largo de sus expediciones. Un ejemplo de cómo funcionan es su última y duodécima expedición que dura hasta la actualidad; la denominan "Lives and Legends of the Mediterranean Sea 2011-present" (*Heraclitus Research Vessel*, 2019b). En ella se grabaron 150 entrevistas a pescadores, gentes del mar y habitantes costeros de 6 países y se documentó el cambio acaecido en estos últimos años. Estos archivos se han guardado en el *Ocean Pavilion de TBA21* de Venecia. La falta de presupuesto y la flexibilidad del *Dédalo* resultaron decisivos para su elección para este proyecto. La razón de su inclusión en nuestro análisis es porque muestra la importancia de documentar la opinión de los afectados por el cambio climático y que no se pierda la memoria sobre estos cambios acaecidos.

Memorias de la ocupación en Grecia

Este proyecto, de la *Freie Universität Berlin* (*Memories of the Occupation in Greece*, 2019a) conserva "la memoria de los testigos griegos contemporáneos de la ocupación alemana de Grecia bajo los nazis. Sus cuentas se registran, investigan y ponen a disposición en una plataforma en línea" (*Memories of the Occupation in Greece*, 2019a). Este proyecto, cuyo investigador principal, coordinador de un extenso equipo, es Nicolas Apostolopoulos, cuenta con la financiación de varias instituciones internacionales como son: la *Freie Universität Berlin* a través del *Center for Digital System Center* (*CeDiS*); la *Federal Foreign Office Berlin* que financia investigaciones para reevaluar la Segunda Guerra Mundial; la *Stavros Niarchos Foundation* que es una organización filantrópica internacional privada; y la fundación *Remembrance, Responsibility and Future* que aboga por el fortalecimiento de los derechos humanos y el entendimiento entre las naciones. Además, son socios del proyecto la propia empresa *Render*, así como la *National and Kapodistrian University of Athens.*

El proyecto se divide en dos fases. En la primera se realizaron las entrevistas coordinadas por el Dr. Hagen Fleischer de la *Universidad de Atenas*. Normalmente primero se hacen las entrevistas y luego se crea el portal web para gestionarlas y difundirlas, en este caso además era importante grabarlas lo antes posible puesto que narran hechos ocurridos a principios de los años 40 y cada día quedan menos testigos de aquellos años. Hemos incluido este proyecto para mostrar la flexibilidad de este software en la gestión de documentación delicada en situación de emergencia. La colección está formada por 91 entrevistas a testigos de la ocupación alemana de Grecia bajo los Nazis (1941-1944) (*Memories of the Occupation in Greece,* 2019b).

El proyecto tiene como objetivo crear una muestra representativa que incluya testigos variados: presos políticos, judíos, internos de campos de concentración, combatientes y un largo etc. Estos testigos narran en las entrevistas cómo vivieron aquellos momentos para que se preserve su memoria y también la de la Grecia de posguerra.

La segunda fase del proyecto es la creación del portal web para difundir las entrevistas digitales; para ello este proyecto se fijó en *Dédalo*, a fin de poder ofrecer todas las funcionalidades que querían y que pasamos a describir. Además de las entrevistas con audio y vídeo, el portal permite visualizar las transcripciones, traducciones, fotografías y documentos relacionados, biografías cortas y más informaciones desarrolladas. Además, para mejorar la recuperación de la información habría varias funcionalidades disponibles como son las palabras clave, encabezados, resúmenes cualitativos y una búsqueda mejorada que tiene varias opciones de búsqueda: por personas, metadatos y búsqueda a texto completo. El sistema está preparado, gracias a *Dédalo*, para buscar dentro de las entrevistas por subcolecciones, grupos, lugares o experiencias y ver partes individuales de las entrevistas, indexándose las entrevistas según los lugares, campamentos, empresas y personas (*Memories of the Occupation in Greece*, 2019b).

5.2. Ejemplos de uso de *Numisdata*

Como se ha señalado antes, la segunda utilidad de este software, además de gestionar patrimonio audiovisual, es gestionar patrimonio numismático. Para ello se ha configurado *Numisdata*, un modelo de datos destinado a gestionar información numismática normalizada.

Tras una primera aplicación de *Dédalo* en arqueología en 2015, cuando la empresa *Render* desarrolló el sistema de gestión integral para los fondos y actividades del *Museu de Prehistòria de València*, y en dicho contexto de colaboración entre este y la empresa *Render*, se ideó, en el año 2016, la creación de un desarrollo específico del software para la ordenación y publicación de contenidos numismáticos, que posteriormente se denominó *Numisdata* (**Peña-Carbonell**; **Gozalbes**, 2019).

En 2017 se registró el dominio *numisdata.org* y, hasta el momento, esta plataforma numismática de gestión del patrimonio se ha utilizado para 3 proyectos. Por un lado, dos pequeños proyectos que sirven para testear la plataforma y que se reflejan aquí por su influencia directa en el acabado de *Numisdata*, como son el creado para dar a conocer hallazgos monetarios de Cerdeña (*Numisdata Sardinia*, 2019), y el de una colección privada de historia monetaria valenciana (*Numisdata Valencia*, 2019). El proyecto de mayor envergadura es el dedicado a crear un catálogo de las monedas antiguas de la Península Ibérica (*Moneda Ibérica*, 2019) (**Peña-Carbonell** *et al.,* 2018).

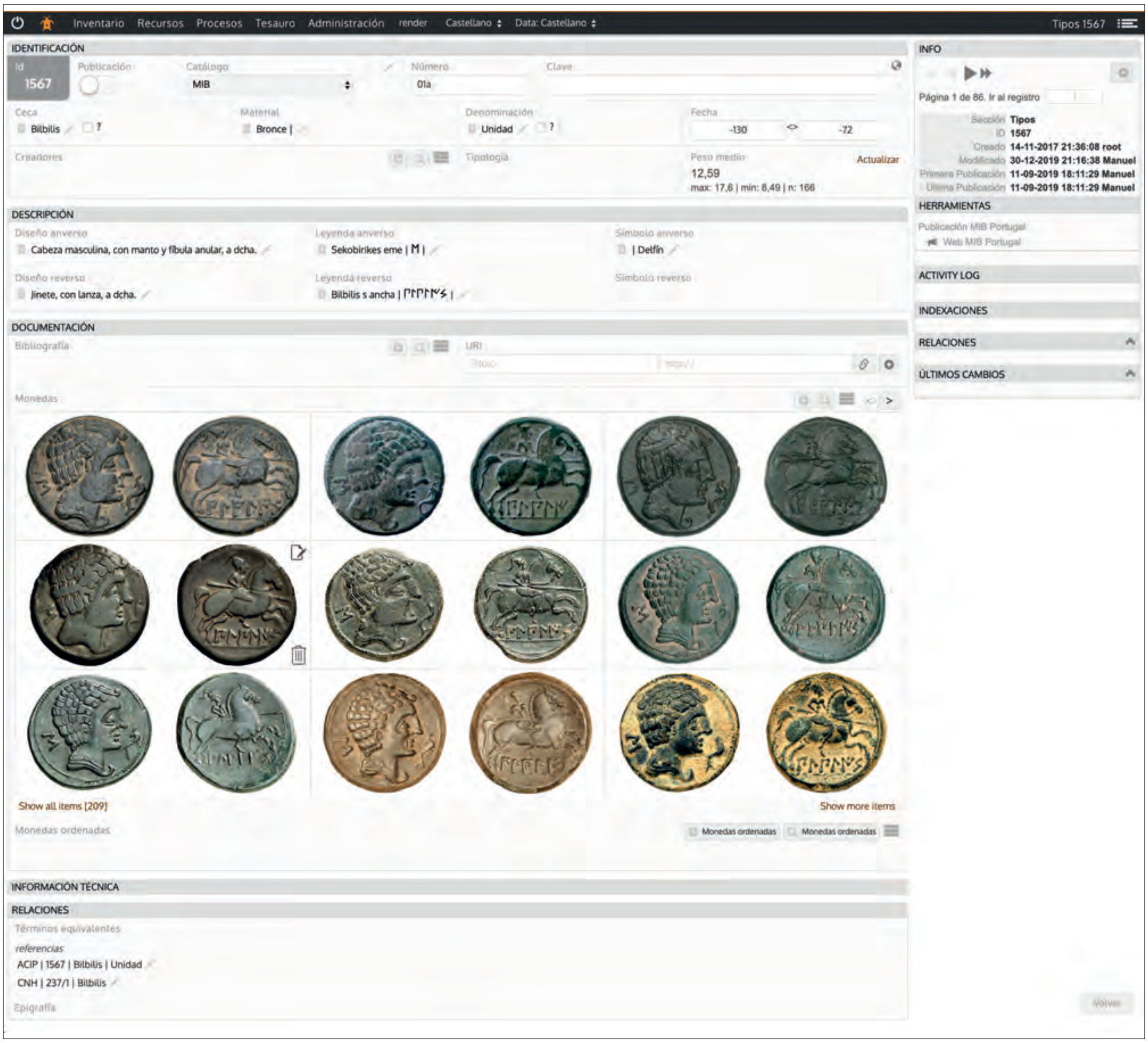


Figura 7. *Numisdata*, funcionamiento interno. Fuente: Moneda ibérica.

En la adaptación de *Dédalo* para gestionar patrimonio numismático la información está organizada en secciones (tablas) y componentes (campos). Además, se ha incorporado una gran variedad de funciones que facilitan el trabajo con estos materiales (figura 7). La organización de las secciones está adaptada a los hábitos de la investigación numismática, que condicionan el modelo de datos para permitir la compatibilidad con el esquema de descripción numismática (NUDS), diseñado por Sebastian Heath y desarrollado en formato RDF por Ethan Gruber en el contexto del proyecto de colaboración "nomisma.org" (*Nomisma.org*, 2017). También permite establecer equivalencias entre tipos, crear catálogos de contenido personalizado e incluye una aplicación epigráfica diseñada para crear leyendas que combinan signos especiales en formato SVG con caracteres Unicode normalizados (**Peña-Carbonell** *et al.,* 2018).

Los responsables que dotan de contenidos a los proyectos anteriormente mencionados destacan de *Numisdata*/*Dédalo* (**Peña-Carbonell** *et al.,* 2018):

- La gestión de los idiomas: es una plataforma multiidioma sin añadir complejidad en la gestión. Cada campo alberga todos los idiomas que sean necesarios lo que facilita las acciones rutinarias como las traducciones de datos. Es multilingüe.
- La potencia de los tesauros para organizar la información, es multitesauro.
- La gestión de todos los recursos multimedia (imagen, pdf, vídeo, audio) incluyendo la importación masiva con la creación automática de registros y la incorporación de datos.
- La seguridad: máquina del tiempo para recuperar registros y máquina del tiempo para recuperar la información de los campos en cualquiera de sus versiones precedentes. Ello se considera fundamental para la seguridad de un sistema cuya naturaleza es colaborativa.
- La potencia del trabajo colaborativo con las utilidades de administración que permiten un control total sobre las tablas, campos y registros a los que cada usuario puede acceder.

- Los procesos con funcionalidades específicas adaptadas y diseñadas para cada proyecto. *Dédalo* y su evolución *Numisdata* pueden adaptarse con flexibilidad a las características que necesita cada proyecto.
- Se ha de destacar también que la plataforma es multi bibliografía.

Los siguientes proyectos, entre otros, usan *Numisdata*:

Numisdata Sardinia

Esta iniciativa surge en el contexto de unos proyectos de la *Universitat de València* sobre el poblamiento rural de Cerdeña conforme a los proyectos de investigación HAR 2009-11116, HAR 2012-32488 y HAR 2016-76100 (*Numisdata Sardinia*, 2019). El equipo de investigación formado por un equipo arqueológico y equipo numismático internacional (*Numisdata Sardinia*, 2019b) está dirigido por Carlos Gomez-Bellard y un grupo de investigación de la *Universitat de València* (*Numisdata Sardinia*, 2019c), el *Museu de Prehistòria de València* y *Render* como socio tecnológico (**Peña-Carbonell**; **Gozalbes**, 2019).

El propósito de este proyecto y su web es difundir los hallazgos monetarios encontrados durante las excavaciones realizadas en el área del municipio de Terralba en Cerdeña, así como las colecciones de Gino Artudi y Sandro Perra donadas al estado italiano (*Numisdata Sardinia*, 2019). En la web se han catalogado 376 monedas desde el siglo IV a.C. al siglo IV d. C., todas ellas digitalizadas y descritas.

Numisdata Reino de Valencia

Es un proyecto financiado por la *Generalitat Valenciana* cuyo objetivo es difundir la colección Vidal Valle, la más importante de moneda valenciana (*Numisdata Valencia*, 2019). Se trata de 1.061 monedas acuñadas en distintos lugares del territorio valenciano desde la Antigüedad (siglo IV a.C.) hasta los años de la Guerra Civil (1936-1939). Se trata de una colección que se formó en el siglo XX a base de un importante esfuerzo personal y que se benefició de la adquisición de otras colecciones previas (*Numisdata Valencia*, 2019b).

Moneda Ibérica

> "Es una base de conocimiento para el estudio, conservación, catalogación, archivo y difusión del patrimonio numismático antiguo de la Península Ibérica y del sur de Francia. Se ocupa de las acuñaciones pre-imperiales de Iberia/Hispania y del sur de Galia, emitidas durante los siglos VI-I a.C." (*Moneda Ibérica*, 2019).

A finales de 2019 empezó a albergar los primeros contenidos. Se trata de un archivo formado por más de 125.000 fichas de monedas de diversos orígenes que se han ido recopilando a lo largo de los últimos 40 años (*Moneda Ibérica*, 2019) (figura 8).

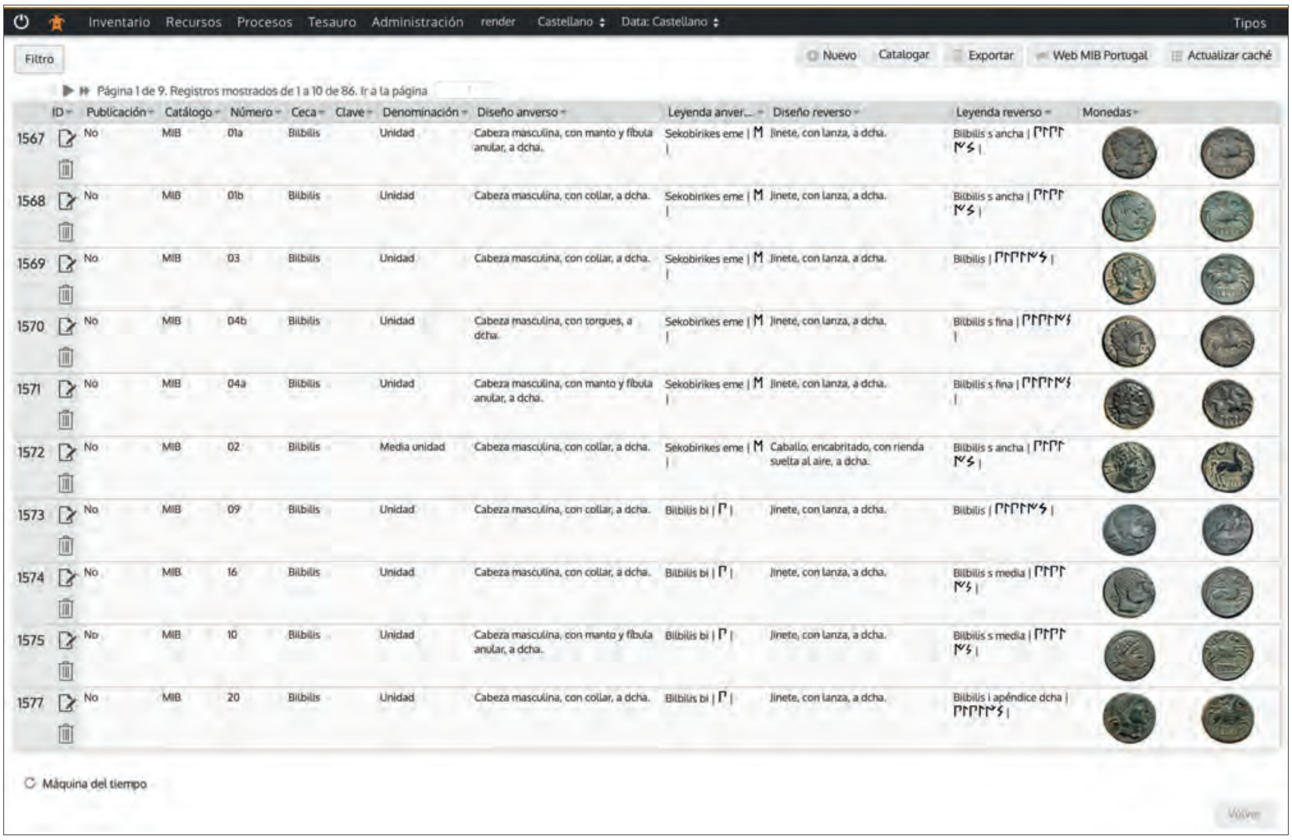


Figura 8. *Numisdata*, catálogo de *Moneda Ibérica*. Fuente: *Moneda ibérica*.

Moneda Ibérica es un proyecto con un equipo de investigación formado por investigadores de *la Universitat de València* y del *Museu de Prehistòria de València*, pero cuyo ámbito de investigación es internacional, ya que estudia las piezas de España, Portugal y el Sur de Francia. Además, se desarrolla dentro del proyecto europeo internacional *ARCH*, *Ancient Coinage as Related Cultural Heritage*, que fue concedido a finales del año 2017 dentro de la convocatoria *Joint Programming Initiative on Cultural Heritage 2* (**Peña-Carbonell**; **Gozalbes**, 2019). Se trata de un proyecto en el que participan la *University of Oxford* con Andrew Meadows, la *Bibliothèque nationale de France* con Frédérique Duyrat y la *Universitat de València* con Pere-Pau Ripollès como investigadores principales. Además, colabora un gran número de instituciones asociadas como son el *Museu de Prehistòria de València*, *The American Numismatic Society* (New York), *Berlin-Brandenburgische Akademie der Wissenschaften* (Berlin), *Institut de recherche sur les archeomateriaux*, *Centre Ernest-Babelon* (Orléans) y el *CNRS* (*Centre national de la recherche scientifique*), *Laboratoire Aoroc, École Normale Supérieure* (Paris) (**Peña-Carbonell**; **Gozalbes**, 2019).

ARCH se caracteriza por utilizar *linked open data*, muy presente en *Dédalo*, y tiene por objetivo crear una plataforma global para el estudio, curación, archivo y preservación del patrimonio monetario del mundo antiguo (*Online Greek Coinage,* 2019).

El mismo consistirá en un portal único y central que dará acceso a múltiples recursos tipológicos que actualmente están en fase de desarrollo. *Moneda Ibérica* será la primera piedra de este gran proyecto. Por otro lado, *ARCH* no es sino la denominación del proyecto que se solicitó a la Unión Europea, es decir, la convocatoria que proporcionó una financiación inicial a esta iniciativa. El portal y la web del proyecto original con el que será conocido es *Online Greek Coinage* (*OGC*) (*Online Greek Coinage*, 2019b).

5.3. Futuros proyectos a corto plazo

A corto plazo, la empresa *Render,* creadora de *Dédalo,* está trabajando en nuevos proyectos con otras instituciones. En España trabaja, en fase de desarrollo, en dos proyectos con el gobierno de Navarra, uno sobre memoria histórica con un archivo de entrevistas y otro de catalogación de patrimonio cultural inmaterial.

También está trabajando con el *Museu Virtual de Quart de Poblet*, que cuenta con financiación europea y será accesible en 2021:
http://museuquartdepoblet.org

Render participa así mismo en la creación de un nuevo archivo de *Memoria Oral en Baleares*.

A nivel internacional participa en el proyecto *ARCH*, que será visible en el año 2021, junto con la *University of Oxford* y la *Bibliothèque nationale de France*. Está gestionando una cantidad ingente de documentación con *Dédalo*, según se informa en su web (*Online Greek Coinage*, 2019c):
https://www.greekcoinage.org/introducing-the-ogc-project.html

> "Es casi más fácil definir esta masa dispar de monedas por lo que no incluye: cualquier cosa producida por el estado de Roma, o teñida por la noción anticuaria de los celtas".

Este software por tanto está en disposición de ser de utilidad también para grandes proyectos o empresas que tengan ingentes cantidades de documentación.

5.4. Comparación con otros softwares

Este apartado incluye el análisis y valoración de otros softwares según sus autores, así como consultas a la empresa *Render* y a los gestores de proyectos que usan *Dédalo*, comparándolo con los softwares anteriores que usaban.

Se puede establecer una comparativa de *Dédalo* respecto a dos tipos de programas. Por una parte, los MAM; por otra, CMS generalistas o especializados. Respecto al primer grupo de programas, como se ha señalado, ya existe un estudio comparativo de MAM (**Cascón-Katchadourian**, **Ruiz-Rodríguez** y **Alberich-Pascual**, 2018). Se puede señalar que, desde ese estudio, *Dédalo* ha mejorado ostensiblemente en varios aspectos, sobre todo en el control de accesos y en la gestión de permisos, debido a que las instituciones públicas son muy estrictas en ese sentido, así como también ha mejorado en los formatos audiovisuales soportados, de facto incluye todos los de *FFmpeg*[1]. De igual manera no hay limitaciones de *Dédalo* en el tamaño y la cantidad de los archivos que gestiona, más allá de los límites propios del servidor donde se instala.

En cuanto a la comparativa con los CMS, como pueden ser *WordPress*, *Drupal* o *Django*, el primer elemento a destacar es que *Dédalo* no es generalista ni está centrado en la creación de webs institucionales, sino que es un programa especializado en la gestión de patrimonio cultural, con herramientas altamente enfocadas a esta área. Su ámbito es la gestión de colecciones y su posterior publicación, mientras que los CMS generalistas más populares no son capaces de gestionar cientos de miles de registros y/o no contemplan la edición o análisis de los materiales (indexación o estructuración de la información). En este caso se trata de programas diseñados teniendo en cuenta la publicación, *Dédalo* está centrado en el análisis, posibilitando el registro, la ordenación e interpretación del patrimonio que gestiona con sistemas de difusión.

Si lo comparamos con otros programas de gestión de patrimonio cultural, *Dédalo* tiene una versatilidad que no se suele encontrar en ellos, ya que tradicionalmente se han centrado en el registro y en la catalogación, sin pensar en la difusión

del contenido gestionado, en la publicación web. A día de hoy, este enfoque se puede considerar insuficiente, y, por ejemplo, las iniciativas de catalogación internacional como *Nomisma*, se basan en estándares web y en la conexión de archivos.
http://nomisma.org

En este sentido, *Dédalo* estaría alineado con tendencias como la de la web semántica basada en publicar con estructuras de datos que puedan ser reaprovechados por terceros.

Existe un programa con algunas características similares a *Dédalo* al tratarse de un CMS especializado en gestión de patrimonio cultural, *Arches* (*Arches, 2019*). Es también un programa de código abierto, basado en web, pero en este caso, sólo para arqueología. Frente a este, *Dédalo* es más versátil puesto que genera herramientas muy especializadas para cada utilización; por eso gestiona patrimonio oral o numismática, claramente diferenciados. Por ejemplo, para historia oral existe un proceso específico de transcripción; para arqueología uno de geolocalización de yacimientos; o para objetos de arte, el análisis de simbolismo de obras, etc. También hay que destacar que aunque hay otros programas que hacen cosas parecidas, no son de código abierto. Es el caso de *Museum Plus* (propietario), *Catalogit* (propietario) o *Domus* (de escritorio y no permite la publicación web). Por último, las instituciones con las que hemos contactado y que utilizan *Dédalo* convienen en que la potencia que este ofrece es superior a la de otros programas de gestión que han utilizado anteriormente como *Drupal*, *Access*, *Oracle*, *Inmedia* o *FileMaker.*

6. Conclusiones

Por las múltiples funciones que atesora, sus especificaciones técnicas y por la facilidad con la que gestiona la documentación audiovisual y numismática hasta su publicación en la web, *Dédalo* y su derivado *Numisdata*, son programas muy interesantes para los tiempos actuales cuando la documentación no solo tiene que estar bien descrita y digitalizada para preservar su contenido, sino que también tiene que ser transmitida y difundida a través del medio adecuado en nuestros días, internet.

Sus puntos fuertes consisten en que está basado en estándares e interoperabilidad, es completamente multilenguaje y multitesauro (incluye tesauros propios y permite la creación de nuevos), permite el trabajo online y colaborativo, trabaja con estándares web, gestiona múltiples formatos o inputs, es seguro al cumplir la ley de protección de datos en su nivel más alto, además de ofrecer una "máquina del tiempo" para subsanar un error. Además, hay que destacar que es un software pensado para la gestión del patrimonio cultural. Ello quiere decir que no es un MAM o un CMS generalista pensado para la publicación web, sino que se trata de un software que permite tanto el registro y catalogación como la investigación de los bienes, además de su publicación. Igualmente, el modelo de datos de *Dédalo* permite que la aplicación pueda utilizarse en cualquier tipo de patrimonio: arqueología, etnología, arte o historia.

Si a ello añadimos que es una plataforma de desarrollo abierta, de libre distribución y de código abierto, queda claro que estamos ante una opción altamente recomendable para diversos tipos de usuarios y organizaciones. En primer lugar, porque asegura que los contenidos introducidos no serán cautivos de empresas con tecnologías propietarias y sin posibilidad de recuperar el trabajo realizado. Pero también debido a que cualquier usuario con los conocimientos adecuados puede transformarlo y adaptarlo a sus necesidades. Este hecho, unido a la predisposición de la empresa creadora, *Render*, de trabajar en proyectos colaborativos y de creación de un diálogo organización usuaria/creadores del software, lleva a que las peticiones para una mejor gestión de la documentación por parte de los usuarios sean escuchadas y se incluyan en las nuevas versiones. Esta flexibilidad y adaptabilidad del software ha hecho que este programa se haya implantado en proyectos muy distintos entre sí, todos ellos con un componente histórico, cultural y social relevante. Se ha mostrado una diversidad de ellos para dejar constancia de las aristas que puede abarcar este software, así como de su evolución a raíz de participar en todos esos proyectos.

Por lo que respecta a los puntos débiles detectados por esta investigación, se pueden señalar tres. En primer lugar, se echa en falta más documentación de apoyo, tanto a nivel de uso como de programación para un software de estas características. En segundo lugar, aunque la comunidad de usuarios empieza a ser relativamente amplia, el proyecto necesitaría más desarrolladores involucrados en la mejora y ampliación del código, así como en el soporte y continuidad del proyecto. Por último, aunque trabajar con estándares web es un punto fuerte, ello hace que *Dédalo* sea difícil de instalar y mantener por parte de usuarios sin conocimientos tecnológicos, ya que requiere de un servidor, línea de datos y de una infraestructura tecnológica.

En cuanto a sus posibilidades de expansión, creemos desde esta investigación que el hecho de que se esté reescribiendo la mitad del software y se esté modernizando la interfaz hará que *Dédalo* dé un salto cualitativo de cara a ser utilizado por otras instituciones públicas, así como por empresas. Técnicamente las posibilidades de expansión son ilimitadas puesto que es un software modular, lo que permite generar aplicaciones específicas que son fácilmente incorporables. El modelo está basado en programación de objetos y la inclusión de nuevos componentes o módulos es muy amplia y sencilla.

Por ultimo, en cuanto a la comparación con otros softwares, constatamos la superior valoración de *Dédalo* para la gestión de patrimonio cultural con respecto a otros MAM, CMS o sistemas híbridos. En nuestra opinión, la clave de *Dédalo* es que está especializado en el sector del patrimonio cultural en un sentido amplio, y a la vez es altamente versátil para ofrecer adaptaciones de esas herramientas en distintos ámbitos concretos.

Como se ha podido observar, *Dédalo* ha dejado de ser en los últimos años un programa local de ciertas instituciones de la Comunidad Valenciana para empezar a colonizar con éxito otros territorios internacionales, lo cual augura una evolución todavía mayor a medio y largo plazo.

7. Nota

1. *FFmpeg* es un proyecto de software gratuito y de código abierto que consta de un gran conjunto de bibliotecas y programas para manejar vídeos, audios y otros archivos, y transmisiones multimedia. En su núcleo está el programa *FFmpeg* en sí, diseñado para el procesamiento de archivos de audio y vídeo basado en línea de comandos.

8. Bibliografía

Agirreazaldegi-Berriozabal, Teresa (2007). "Claves y retos de la documentación digital en televisión". *El profesional de la información*, v. 16, n. 5, pp. 433-442.
https://doi.org/10.3145/epi.2007.sep.05

Aguilar-Gutiérrez, Manuel; **López-De-Solís, Iris** (2010). "Nuevos modos de trabajo de una redacción digital integrada: el caso de los servicios informativos de TVE". *El profesional de la información*, v. 19, n. 4, pp. 395-403.
https://doi.org/10.3145/epi.2010.jul.09

Arches (2019). *What is Arches?*
https://www.archesproject.org/what-is-arches

Ayuntamiento de Paiporta (2019). Arxiu de la Memòria Històrica de Paiporta.
https://memoriahistorica.paiporta.es

Caldera-Serrano, Jorge (2013). "Hacia la indización automática de documentos audiovisuales televisivos". *Perspectivas em gestão & conhecimento*, v. 3, n. 1, p. 3-12.
https://periodicos.ufpb.br/ojs2/index.php/pgc/article/view/15251

Caridad-Sebastián, Mercedes; **Hernández-Pérez, Toni**; **Rodríguez-Mateos, David**; **Pérez-Lorenzo, Belén** (2011). *Documentación audiovisual: Nuevas tendencias en el entorno digital*. Madrid: Síntesis. ISBN: 978 84 975674 6 6

Cascón-Katchadourian, Jesús; **Ruiz-Rodríguez, Antonio-Ángel**; **Alberich-Pascual, Jordi** (2018). "Revisión, análisis y evaluación de sistemas para la gestión de activos multimedia en organizaciones". *Revista española de documentación científica*, v. 41, n. 1.
https://doi.org/10.3989/redc.2018.1.1481

Codina, Lluís (2000). "Evaluación de recursos digitales en línea: conceptos, indicadores y métodos". *Revista española de documentación científica*, v. 23, n. 1, pp. 9-44.
https://doi.org/10.3989/redc.2000.v23.i1.315

Codina, Lluís; **Del-Valle-Palma, María** (2001). "Bancos de imágenes y sonido y motores de indización en la WWW". *Revista española de documentación científica*, v. 24, n. 3, pp. 251-274.
https://doi.org/10.3989/redc.2001.v24.i3.58

Corbella-López, Gerard (s. f.). *Banco audiovisual de testimonios. Un archivo de referencia como política pública de memoria.*
http://memoria.gencat.cat/web/.content/00_arxiu_memoria_historica/colleccions/BAT_article_Banc_Audiovisual_de_Testimonis_del_Memorial_Democratic_.pdf

Dédalo (2019a). *FAQs.*
http://www.fmomo.org/dedalo/pg/faqs.php?lang=es

Dédalo (2019b). *Home*.
http://www.fmomo.org/dedalo/pg/?lang=es

Dédalo (2019c). *Dédalo: Cultural heritage & oral history management system.*
https://github.com/renderpci/dedalo

Dédalo (2019d). *Documentación.*
http://www.fmomo.org/dedalo/pg/docu.php

Dédalo (2019e). *Usuarios.*
http://www.fmomo.org/dedalo/help/admin/Usuarios_es.pdf

Dédalo (2019f). *Captaciones*.
http://www.fmomo.org/dedalo/help/captaciones/Captaciones_es.pdf

Dédalo (2019g). *Transcripciones*.
http://www.fmomo.org/dedalo/help/transcripcion/Transcripcion_es.pdf

Dédalo (2019h). *Tesauro.*
http://www.fmomo.org/dedalo/help/tesauro/Tesauro_es.pdf

Dédalo (2019i). *Indexación.*
http://www.fmomo.org/dedalo/help/indexacion/Indexacion_es.pdf

Equipo de desarrollo de Dédalo (2014). *Dédalo, Sistema de gestión de patrimonio cultural e historia oral. En el Laberinto de la Memoria*.
https://www.academia.edu/37495127/En_el_laberinto_la_memoria_.pdf

Guixé, Jordi (2017). "Testimonios, políticas de memoria y patrimonio intangible, usos y ejemplos". *Historia y comunicación social*, v. 22, n. 2, pp. 381-395.
https://doi.org/10.5209/HICS.57850

Heraclitus Research Vessel (2019a). *Home*.
https://rvheraclitus.org

Heraclitus Research Vessel (2019b). *12. Lives and legends of the Mediterranean sea 2011-present.*
https://rvheraclitus.org/project/12-lives-legends-mediterranean-sea-2011-present

Institute of Ecotechnics (2019a). *Institute of Ecotechnics*.
https://ecotechnics.edu

Institute of Ecotechnics (2019b). *Research Vessel Heraclitus: World Ocean.*
https://ecotechnics.edu/2017/12/research-vessel-heraclitus

Jiménez-López, Àngels (2003). "Digital asset management: la gestión de la información multimedia en las organizaciones". *El profesional de la información*, v. 12, n. 6, pp. 452-461.
http://profesionaldelainformacion.com/contenidos/2003/noviembre/4.pdf

Kurz, Thomas; **Güntner, Georg**; **Damjanovic, Violeta**; **Schaffert, Sebastian**; **Fernández, Manuel** (2014). "Semantic enhancement for media asset management systems". *Multimedia tools and applications*, v. 70, n. 2, pp. 949-975.
https://doi.org/10.1007/s11042-012-1197-7

Lizarralde, Koldo (2009). "Media asset management (MAM) y plataformas de digitalización de contenidos de ETB (transcripción de la ponencia)". En: Agirreazaldegi, Teresa; Camacho, I. (eds.). *Los servicios de documentación en los medios de comunicación del País Vasco*. Leioa: Universidad del País Vasco, pp. 159-181.

López-Yepes, Alfonso (2015). *Patrimonio audiovisual en bibliotecas y servicios universitarios a propósito del servicio de documentación multimedia de la universidad complutense*. Brasilia: Universidad Nacional (UnB).

Memories of the Occupation in Greece (2019a). *Memories of the Occupation in Greece.*
http://www.occupation-memories.org/en/index.html

Memories of the Occupation in Greece (2019b). *Description of the project.*
http://www.occupation-memories.org/en/project/description/index.html

Moneda Ibérica (2019). *Moneda Ibérica*.
https://monedaiberica.org/web

Morote-Magán, Pascuala; **Labrador-Piquer, María-José** (2013). *Literatura patrimonial y su salvaguarda.*
https://cvc.cervantes.es/ensenanza/biblioteca_ele/aepe/pdf/congreso_48/congreso_48_34.pdf

Mujer y Memoria (2019). *¿Qué es Mujer y Memoria?*
https://mujerymemoria.org/web/project

Mujer y Memoria (2019b). *Quiénes nos apoyan.*
https://mujerymemoria.org/web/thanks

Mujer y Memoria (2019c). *Información del proyecto. https://mujerymemoria.org/maternidades_robadas/info*

Museu de la Paraula. Archivo de la Memoria Oral Valenciana (2019). *Introducción*.
http://www.museudelaparaula.es/web/home/info.php

Museu Quart de Poblet (2019). *Museu Virtual de Quart de Poblet.*
https://museuquartdepoblet.org/web

Nomisma.org (2017). *Numismatic description schema (NUDS)*.
http://nomisma.org/nuds

Numisdata Sardinia (2019). *Inicios.*
https://numisdata.org/sardinia/web

Numisdata Sardinia (2019b). *Equipo*.
https://numisdata.org/sardinia/web_sardinia/web/equipo

Numisdata Sardinia (2019c). *Proyecto*.
https://numisdata.org/sardinia/web_sardinia/web/proyecto

Numisdata Valencia (2019). *Reino de Valencia. Monedas, medallas y fichas de la colección de Vidal Valle*.
https://numisdata.org/valencia

Numisdata Valencia (2019b). *El proyecto.*
https://numisdata.org/valencia/proyecto

Online Greek Coinage (2019). *The ARCH Project. A project funded by the European JPICH initiative to create a high-level, online typology of Greek Coinage*.
https://www.greekcoinage.org/arch-project.html

Online Greek Coinage (2019b). *Online Greek Coinage. An international project to build a Typology of the coinage of the Ancient World.*
https://www.greekcoinage.org

Online Greek Coinage (2019c). *Introducing Online Greek Coinage.*
https://www.greekcoinage.org/introducing-the-ogc-project.html

Peña-Carbonell, Alejandro (2016). *Dédalo, en el laberinto de la memoria: nuevo modelo de catalogación y análisis.*
https://bit.ly/3ob8xiQ

Peña-Carbonell, Alejandro; **Gozalbes, Manuel** (2019). "El sistema de gestión Numisdata y los hallazgos monetarios". En: *Actas del XVI congreso nacional de numismática*. Barcelona, 28, 29 y 30 de noviembre, in press.

Peña-Carbonell, Alejandro; **Onielfa-Veneros, Juan-Francisco**; **Ripollés-Alegre, Pere-Pau**; **Gozalbes, Manuel** (2018). "I rinvenimenti monetali del Terralbese nel sito numisdata Sardinia. Supplement of the Atti dell'Accademia Peloritana dei Pericolanti". *Classe di Lettere Filosofia e Belle Arti* (first number of the online series), in press.

Rodríguez-Mateos, David (2011). "Documentación audiovisual: nuevas tendencias en el entorno digital". En: Caridad-Sebastián, Mercedes; Hernández-Perez, Tony; Rodríguez-Mateos, David; Pérez-Lorenzo, Belén, *Documentación audiovisual: nuevas tendencias en el entorno digital*. Síntesis, pp. 67-86. ISBN: 978 84 975674 6 6

Sánchez-Molina, Ángel; **Gozalbes-Fernández-de-Palencia, Manuel**; **Peña-Carbonell, Alejandro**; **Onielfa, Juan-Francisco** (2018). "Del papel a la Red. Inventarios y catálogos del Museu de Prehistòria de València". *Archivo de Prehistoria Levantina*, v. XXXII, Valencia, pp. 357-378.
http://www.museuprehistoriavalencia.es/web_mupreva_dedalo/publicaciones/1034/va

Tansley, Robert; **Smith, MacKenzie**; **Walker, Julie-Harford** (2005). "The DSpace open source digital asset management system: Challenges and opportunities". *Lecture notes in computer science*, v. 3652, pp. 242-253.
https://doi.org/10.1007/11551362_22

Unesco (2011). *Día mundial del patrimonio audiovisual.*
http://www.unesco.org/new/es/communication-and-information/access-to-knowledge/archives/world-day-for-audiovisual-heritage

Unesco (2019). *Texto de la Convención para la salvaguardia del patrimonio cultural inmaterial.*
https://ich.unesco.org/es/convenci%C3%B3n

Unesco (2019b). *¿Qué es el patrimonio cultural inmaterial?*
https://ich.unesco.org/es/que-es-el-patrimonio-inmaterial-00003

VSN (2015). *Whitepaper. Todo lo que necesita saber antes de elegir un sistema MAM.*
https://www.vsn-tv.com/es/white-paper-mam

Widen (2019). *Version control and DAM systems.*
https://www.widen.com/what-is-digital-asset-management?ref=dam

Nuevos registros narrativos en el periodismo cómic. Un estudio de caso: *La grieta*

New narrative styles in comic journalism. A case study: *The crack*

Antonio López-Hidalgo; Isaac López-Redondo

Cómo citar este artículo:

López-Hidalgo, Antonio; **López-Redondo, Isaac** (2021). "Nuevos registros narrativos en el periodismo cómic. Un estudio de caso: *La grieta*". *Profesional de la información*, v. 30, n. 1, e300117.

https://doi.org/10.3145/epi.2021.ene.17

Artículo recibido el 23-04-2020
Aceptación definitiva: 10-08-2020

Antonio López-Hidalgo
https://orcid.org/0000-0003-1595-7043

Universidad de Sevilla
Facultad de Comunicación
Avda. Américo Vespucio, s/n.
41092 Sevilla, España
lopezhidalgo@us.es

Isaac López-Redondo ✉
https://orcid.org/0000-0001-9426-6683

Universidad de Sevilla
Facultad de Comunicación
Avda. Américo Vespucio, s/n.
41092 Sevilla, España
ilopez6@us.es

Resumen

La relación entre el cómic y el periodismo es antigua y estrecha, con su reflejo en los diarios a través de la caricatura, la viñeta y la tira cómica. Sin embargo, en las últimas décadas ha surgido un nuevo género: el periodismo cómic, una fórmula creativa que hibrida códigos y rutinas del cómic con recursos narrativos propios del periodismo de inmersión. A principios de los años noventa, Joe Sacco destacó entre una serie de autores que popularizaron este nuevo formato, tomó conciencia de la condición del cómic como género informativo y buscó una fórmula propia para contar historias de no ficción. *El fotógrafo*, publicado originalmente en 2003, supuso la inclusión de fotografías para dar mayor realismo a esta fórmula y narrar la experiencia vivida por Didier Lefèvre en la guerra de Afganistán en 1986. En 2016, los periodistas Carlos Spottorno y Guillermo Abril publican *La grieta*, un relato que vuelve a mezclar códigos procedentes del periodismo y del cómic, donde fotografías sometidas a un tratamiento cromático especial sustituyen a los dibujos en cada viñeta. El presente estudio analiza el impacto y la evolución del periodismo cómic a través de este diario de campo de dos reporteros que recorren una línea fronteriza que comienza en África y llega hasta el Ártico, con el fin de desentrañar las causas y consecuencias de la crisis de identidad de Europa. Una obra traducida a varios idiomas y merecedora de varios premios internacionales, que abre nuevas vías de experimentación narrativa y estética en el terreno del periodismo cómic. El presente trabajo toma como punto de partida la revisión teórica de las aportaciones realizadas en torno al estudio de las conexiones entre cómic y periodismo y se centra en el análisis icónico-verbal de *La grieta*, completando la metodología de trabajo con entrevistas abiertas a los autores de la citada obra.

Palabras clave

Periodismo cómic; Cómic periodístico; Periodismo narrativo; Periodismo de inmersión; Nuevas narrativas periodísticas; Periodismo de investigación; Fotoperiodismo; Crónica periodística; Fotocómic; Rutinas periodísticas; Transmedia.

Abstract

There is an old and close relationship between comic and journalism which is reflected in newspapers through caricatures, bullet points and comic strips. However, comic journalism has emerged in the last decades as a new genre, a creative formula that hybridize comic codes and routines with narratives resources used in inmersive journalism. In the early 1990s, Joe Sacco stood out among a number of authors who popularized this new format, became aware of the journalistic genre condition as an information medium and sought his own formula for telling non-fiction stories. *The photographer*, originally published in 2003, involved the inclusion of photographs to make this formula more realistic and to describe Didier Lefèvre´s experience in the war in Afghanistan in 1986. In 2016, journalists Carlos Spottorno and

Guillermo Abril published *The crack*, a story that once again mixes journalism and comic codes, where photographs subjected to a special chromatic treatment replace the drawings in each vignette. This study analyzes the impact and evolution of comic journalism through this field diary of two reporters who travel the path from Africa to the Arctic follow a boundary line that extends from Africa to the Artic, in order to unravel the causes and consequences of Europe's identity crisis. A work translated into several languages and awarded with international prizes, which opens up new paths for narrative and aesthetic experimentation in the field of comic journalism. This paper takes as a starting point the theoretical review of the contributions made around the study of the connections between comic and journalism and focuses on the iconic-verbal analysis of *The crack*, completing the work methodology with open-ended interviews with the authors of the mentioned work.

Keywords

Comic journalism; Journalistic comic; Narrative journalism; Immersive journalism; New journalistic narratives; Investigative journalism; Photojournalism; Journalistic chronicle; Photo comic; Journalistic routines; Transmedia.

1. Introducción. Una nueva narrativa transmedia

La búsqueda de lenguajes nuevos y la experimentación con narrativas emergentes es una constante en el quehacer del profesional de la información en su afán por acercarse a todo tipo de públicos y por adaptarse a los tiempos. En esta búsqueda, la experimentación ocupa un lugar determinante, con maridajes como el que han protagonizado el cómic y el periodismo. En efecto, el dibujo y el periodismo mantienen una larga relación manifestada a través de la caricatura, la viñeta y la tira cómica. Pero en los últimos años ha surgido un nuevo género: el periodismo cómic –consideramos este término el más idóneo pese al uso de otros como cómic-periodismo, cómic periodístico, periodismo en viñetas o periodismo de historietas–. Este género hay que enmarcarlo dentro del periodismo transmediático. **Irala-Hortal** (2014) recuerda que la narrativa transmediática es una fórmula de comunicación multimedia e hipertextual basada en la transmisión de un contenido, una historia o una pieza periodística por diferentes medios (imagen, audio, vídeo), respetando las fórmulas de expresión de cada uno de ellos. Se trata de usar diferentes lenguajes para comunicar de una forma más profunda y completa un determinado hecho.

Fue Henry Jenkins quien inicialmente trasladó el término "transmedia" a la narrativa audiovisual de no ficción en 2007, donde ya planteaba cuestiones como la sistematización en la difusión de las piezas, la importancia de coordinarlas, las sinergias con la industria mediática o las diferentes aportaciones de cada plataforma (**Jenkins**, 2007). Más adelante, Kevin Moloney analizó las características aportadas por Jenkins desde la perspectiva periodística. Dicho autor asegura que el periodista elige el medio e impone sus propios límites: audio, vídeo, foto fija, infografía, etcétera. A su juicio, estos son los rasgos de la narrativa transmediática trasladados al periodismo (**Moloney**, 2011):

- Una amplia o fácil difusión (*spreadable*). La prensa no está ya limitada a su edición en papel. Además, los medios cuentan con blogs y cuentas en redes sociales, sin olvidar el email, lo que facilita la conexión con los lectores.
- Fomenta la profundización (*drillable*). Se trata de permitir que el lector se convierta también en investigador y que profundice mediante enlaces que le lleven a otras narraciones, datos o noticias y reportajes relacionados.
- Continuidad del estilo editorial (*continuous and serial*). Hace referencia a cómo las diferentes perspectivas de una historia pueden contarse de forma seriada y al trabajo bien coordinado de un grupo de periodistas para conseguir la coherencia y continuidad editorial.
- Aportación de diferentes puntos de vista (*diverse and personal in viewpoint*). Cada periodista aporta un discurso. Para Moloney, la completa objetividad es imposible y apela a la honestidad del profesional de la información. Considera que el discurso se construye con multiplicidad de narrativas y con la participación de un lector-periodista.
- Inmersión (*immersive*). La historia que el periodista vivió debe vivirla también el lector/espectador. Investigación y tecnología se unen para que el lector-espectador tenga una experiencia verdaderamente inmersiva.
- Extracción (*extractable*). El lector puede extraer algo útil de la pieza periodística para aprovechar en su vida, sobre todo a partir de los datos que obtiene de fuentes primarias.
- Mover al lector hacia la acción (*inspiring to action*). Con piezas que ayudan a conocer y comprender el contexto de un acontecimiento, el ciudadano comprende mejor las motivaciones de las personas y puede participar en ellas.
- Profundización en los mundos colaterales (*built in real worlds*). No se trata de que el periodismo construya mundos nuevos, pero sí de que se esfuerce por dar voz a múltiples actores de un acontecimiento.

Todas estas características coinciden con las reflexiones de diversos autores y periodistas, que consideran que estas nuevas fórmulas

> "han llegado a la profesión y estamos ante el inicio de una nueva era del periodismo, su producción, su consumo y su influencia social" (**Irala-Hortal**, 2014, p. 151).

Este periodismo transmediático busca, en definitiva, la connivencia del lector y la mayor inmersión posible en la historia con productos narrativos que abordan nuevos temas, con arriesgadas investigaciones que incluyen profundas documentaciones e inmersiones en el contexto del acontecimiento. Uno de esos productos narrativos es el periodismo cómic, que usa e hibrida elementos y códigos propios de cada una de las dos disciplinas que le dan nombre.

1.1. Una aproximación al periodismo cómic

Para llevar a cabo el presente estudio, resulta necesario tomar como punto de partida el cómic, que **Castillo-Vidal** (2004, p. 253) define como un medio elíptico que convierte a la viñeta en la unidad básica de la sintaxis de narración alrededor de la cual se articula el relato. Sus características podrían resumirse así:

- es un medio visual (gráfico-escrito) porque es la integración de elementos tanto icónicos como escritos;
- se trata de un mensaje predominantemente narrativo, que cuenta con un inicio, un desarrollo, un clímax y un desenlace;
- utiliza una serie bien definida (en sus aspectos básicos) de convenciones y códigos específicos: gestos y expresiones, símbolos cinéticos o movilgramas, metáforas visuales o ideogramas, onomatopeyas, entre otros;
- los personajes, generalmente, son de un tipo y responden a un estereotipo;
- para indicar que los personajes están hablando se emplean globos, que deben ser planeados de tal manera que sean prominentes y fáciles de leer;
- maneja un criterio de síntesis (de palabras, dibujo y acción) para evitar la sobrecarga de información y lograr dinamismo;
- su finalidad es ética, distractiva, informativa y educativa, sin embargo, puede abordar los más diversos y controvertidos temas desde, aparentemente, una simple aventura infantil, hasta el más complejo, político, económico y filosófico;
- su realización se efectúa teniendo usualmente una amplia difusión.

Autores como **Espiña-Barros** (2004), **Melero-Domingo** (2012) o **Matos-Agudo** (2017) han reflexionado sobre las conexiones existentes entre el periodismo y el cómic para establecer que se trata de una relación simbiótica en la que ambas partes se nutren mutuamente de los elementos que dan sentido a la naturaleza individual de cada una de ellas, esto es: los historietistas y dibujantes tratan la no ficción en sus cómics, mientras que los periodistas y artistas gráficos aúnan esfuerzos para narrar conjuntamente relatos que hibridan las técnicas del cómic y los recursos narrativos del reportaje o de la crónica de inmersión, propios del periodismo.

Tomando el cómic como primer escenario de análisis, Santiago García reivindica que la ficción no ha de ser necesariamente su único argumento y asegura que en los últimos tiempos han abundado las obras históricas, divulgativas o periodísticas en el cómic (**García**, 2013, p. 22). **Melero-Domingo** (2012) comparte este punto de vista y añade que el desarrollo de contenidos de actualidad en el cómic es consecuencia tardía de la consolidación de la llamada sociedad de la comunicación de masas. El crecimiento de la demanda de productos periodísticos, unido a la progresiva alfabetización de las capas populares, ha contribuido a generalizar el consumo de información de actualidad, y este hábito explica la inyección de realidad que han experimentado soportes y medios culturales tradicionalmente sujetos a la ficción narrativa, como es el caso del cómic.

A principios de este siglo 21, **Espiña-Barros** (2004) advertía de la eclosión de un nuevo género dentro del cómic bautizado como "noticias dibujadas" y confirmaba la idoneidad del cómic como un medio adecuado para llevar a cabo trabajos plenamente periodísticos. Dicho autor menciona a Joe Sacco como gran precursor del cómic periodístico y recuerda cómo sus obras beben directamente de los postulados del nuevo periodismo. Una afirmación que ha sido refrendada por autores como **Melero-Domingo** (2012), **Matos-Agudo** (2017) o **González-Cabeza** (2017). Eddie Campbell reivindica la investigación como un extraordinario papel que ha de jugar el novelista gráfico:

> "Ya no es suficiente con quedarse sentado en casa, ante el tablero de dibujo, o incluso frente al ordenador. El novelista gráfico tiene que levantarse e ir a algún sitio" (**Campbell**, 2013, pp. 37-38).

Sin embargo, la no ficción entra de lleno antes en el mundo del cómic con Art Spiegelman, hijo de inmigrantes judíos que sobrevivieron al holocausto. Su obra *Maus* (**Spiegelman**, 2010), que relata las vivencias de sus padres en Auschwitz-Birkenau, recibe en 1991 el premio Pulitzer y se convierte en un referente para la narración gráfica de historias reales. Se trata del primer trabajo que resume aspectos del cómic y del periodismo, pero el autor es un artista gráfico antes que un periodista (**López-Hidalgo**, 2018, p. 101). En Joe Sacco, sin embargo, se dan cita el talento de un buen periodista y un gran dibujante (**Sacco**, 2006; 2010)). Su método de trabajo supone una investigación exhaustiva en gabinete y viajes a zonas de conflicto, donde realiza entrevistas a activistas políticos y testigos de las historias que luego narra, viviendo si es necesario en un refugio o en un asentamiento y asumiendo los riesgos de pasar los días en lugares peligrosos. Como cualquier periodista, recoge su información en cintas magnetofónicas, fotografías y cuadernos de notas para luego dibujar y escribir los hechos que ha vivido. Se trata de puro periodismo de inmersión, como lo haría Nellie Bly, Hunter S. Thompson, Günter Wallraff, Lydia Cacho o Gabriela Wiener (**López-Hidalgo**, 2018, p. 102).

Otra de las obras de referencia en el periodismo cómic es *El fotógrafo* (**Guibert**; **Lefèvre**; **Lemercier**, 2011). El fotoperiodista francés Didier Lefèvre participó en una misión en Afganistán durante la invasión soviética de 1985 con el objetivo de documentar la labor de *Médicos Sin Fronteras* en plena guerra civil. Todo queda plasmado en la citada obra, donde se mezcla dibujo y fotografía. Un rasgo muy particular que sirve como referente para los autores de *La grieta*, la obra que nos ocupa en el presente estudio (**Spottorno**; **Abril**, 2016). En este sentido, el trabajo realizado por Carlos Spottorno y Guillermo Abril supone un paso adelante en esa búsqueda de nuevos lenguajes, pues en ella las fotografías no son un elemento adicional de la historia dibujada, sino que cada imagen, sometida a un tratamiento

> El periodismo de inmersión parte de la premisa de que para narrar al público una realidad es preciso conocerla en profundidad

digital posterior, integra cada una de las viñetas del cómic. Esta particularidad se suma a otras muchas características que enmarcan la obra dentro del periodismo cómic pero que la acercan también al periodismo de inmersión, del que hereda gran parte de sus principios.

1.2. La inmersión como filosofía de trabajo

Para entender los lazos que unen el periodismo cómic con el periodismo de inmersión es preciso detenerse en los rasgos que definen a ambas disciplinas. **Matos-Agudo** (2017, pp. 216-217), que reconoce esta conexión, propone una serie de características comunes para las obras enmarcadas dentro del periodismo cómic:

- reivindicación de la subjetividad del narrador desde la autorreferencialidad. El autor aparece en muchos casos dentro de la acción;
- uso de una combinación de recuerdos ajenos y propios para la realización de la obra;
- elaboración página a página, de forma no seguida, para después montarlas en orden;
- búsqueda de la verdad sobre la base de informaciones de fondo;
- alejamiento de la inmediatez. Cada una de estas obras se tarda en preparar, se reposan;
- firma del autor de una manera visible;
- pluralidad de fuentes;
- uso de la entrevista como herramienta periodística;
- hibridación con medios audiovisuales en la planificación de cada página;
- separación visual mediante elementos propios del cómic como el cambio de color de la página o el uso de rayas o colores diferentes en las viñetas;
- el resultado ofrece una sensación de verdad similar a la que se espera obtener de los medios convencionales;
- las rutinas de trabajo de los autores, con su forma de acercarse al lugar de los hechos, la búsqueda de declaraciones, el trabajo documental, las notas en su libreta… todo coincide con la forma de trabajar de los periodistas.

Por su parte, **López-Hidalgo** y **Fernández-Barrero** (2013) han estudiado en profundidad el periodismo de inmersión y establecido las siguientes características:

- el periodista se introduce en un ambiente determinado, en algunas comunidades o situaciones para experimentar en su propia carne distintas vivencias y perfiles, interactuando con los habitantes de ese microespacio desde una perspectiva personal y empática;
- intenta comprender la realidad a partir de la experimentación propia, lo que confiere un elevado grado de subjetividad al relato;
- la crónica es el género que mejor se adapta a la inmersión, si bien esta modalidad periodística se caracteriza por la hibridación de géneros;
- para mostrar una determinada realidad, el periodista necesita acceder a fuentes que le proporcionen información inaccesible por otras vías;
- el periodismo de inmersión requiere de profesionales con una acusada conciencia social. El periodista debe creer en lo que hace, porque los riesgos personales y profesionales que debe afrontar son demasiado elevados: secuestro, agresiones, torturas psíquicas y psíquicas, miedo a ser asesinado… O sencillamente puede ser sentirse coaccionado o perseguido a la hora de hacer su trabajo;
- el periodismo de inmersión, como método, requiere tiempo;
- el formato de publicación o resultado del periodismo de inmersión suelen ser revistas de periodicidad no diaria para vivir una segunda vida en forma de libro.

En definitiva, el periodismo de inmersión parte de la premisa de que para narrar al público una realidad es preciso conocerla en profundidad. La inmersión del reportero resulta una condición necesaria para conseguir la posterior inmersión de la audiencia en el relato periodístico. Y esto es algo que el periodismo cómic ha integrado en sus rutinas. Cabe señalar que esta filosofía de trabajo no debe confundirse con la del periodismo inmersivo, un concepto incluido también dentro de las nuevas narrativas transmedia pero que nace, sin embargo, de la fuerte influencia del videojuego como industria cultural y de las posibilidades de las tecnologías de realidad virtual, realidad aumentada y la grabación de video de 360 grados. Aquí el concepto inmersivo se puede definir como la presentación de una historia que permite al usuario interactuar con elementos del relato o con datos, donde este no se limita a "leer" una historia online, sino que tiene que "hacer" algo para aprender y entender mejor el tema del que se habla. La interacción no es meramente funcional, sino narrativa (**Domínguez**, 2013). Se trata, por tanto, de un concepto alejado de las rutinas de trabajo propias del periodismo cómic.

2. Objetivos y metodología

El presente trabajo de investigación se ha llevado a cabo poniendo en práctica una metodología de carácter cualitativo, partiendo de la revisión teórica de trabajos de investigación previos centrados en el análisis de las conexiones entre cómic y periodismo. Todo ello a través de una triple revisión historiológica, tematológica y genológica similar a la planteada por **Melero-Domingo** (2012) y a partir del análisis icónico-verbal de la obra que centra el interés del presente trabajo: *La grieta.*

Para llevar a cabo este análisis se han tenido en cuenta las características del periodismo cómic establecidas en el anterior apartado, así como los rasgos definitorios del periodismo de inmersión. El análisis está enriquecido con las aportaciones de los autores de la mencionada obra, recogida en la entrevista abierta o no estructurada realizada por videoconferencia a Guillermo Abril y Carlos Spottorno el 5 de abril de 2019. Este tipo de técnica suele plantearse a cualquier persona que conozca con detalle y exhaustividad una determinada cuestión. Esta modalidad permite al entrevistador elaborar una lista de aspectos clave que necesita cubrir para cumplir con sus objetivos y que se materializa en preguntas. El factor clave de esta técnica es que

> "las respuestas se obtienen en un clima informal de diálogo y admiten explorar las temáticas nuevas que surgen a raíz de la conversación mediante la introducción de preguntas que no se habían previsto en el guion inicial" (**Eiroa**; **Barranquero**, 2017).

A lo largo de un año hemos mantenido un contacto continuo con los autores por el teléfono y correo electrónico, además de una última entrevista telefónica realizada a Carlos Spottorno el 3 de abril de 2020 con el fin de actualizar algunas de las cuestiones relacionadas con el devenir de la obra.

Con todo ello, el presente estudio pretende alcanzar los siguientes objetivos:

O1. Conocer el proceso de creación de *La grieta*, ofreciendo una descripción de la obra.

O2. Determinar si *La grieta* reúne las características propias del periodismo cómic, definidas en el apartado 1.2.

O3. Identificar las conexiones de la citada obra con los rasgos del periodismo de inmersión, recogidos también en el apartado 1.2.

O4. Analizar el uso de la fotografía en *La grieta*, tomando como referencia *El fotógrafo*, una obra que utiliza por primera vez en el periodismo cómic este elemento gráfico como parte indispensable del relato y que sirve como punto de partida a sus creadores.

O5. Definir las nuevas aportaciones de *La grieta*, con el afán de confirmar si nos encontramos ante un nuevo formato de periodismo cómic y proponer, en su caso, una denominación para esta nueva modalidad.

A tenor de los objetivos planteados, este trabajo parte de dos hipótesis:

H1. *La grieta* es una obra que hay que enmarcar dentro del denominado periodismo cómic, una narrativa donde confluyen registros propios del cómic y del periodismo.

H2. La publicación de este libro supone un punto de inflexión en estas nuevas narrativas en tanto que sus autores introducen métodos y herramientas nunca antes empleados en el periodismo cómic, abriendo nuevas vías de expresión dentro de esta hibridación de géneros.

3. Origen y concepción de *La grieta*

Finales de 2013. El día transcurre como otro cualquiera en la redacción de *El país* mientras tiene lugar una tragedia humana en el Mediterráneo, a orillas de la isla griega de Lampedusa, donde mueren cientos de personas tras el naufragio del pesquero en el que viajaban. Los flujos migratorios están en el punto de mira de los medios de comunicación. Eugenia de la Torriente, redactora jefe de *El país semanal*, aborda a Guillermo Abril para plantearle una serie de reportajes centrados en las fronteras europeas que realizará junto al fotógrafo Carlos Spottorno, con quien ya había trabajado anteriormente en otros dos reportajes. El nuevo encargo constituye un proyecto ambicioso que se materializa en diversos viajes a Melilla, la triple frontera de Grecia, Bulgaria y Turquía y, finalmente, Sicilia y Lampedusa. Tras un intenso trabajo previo de producción y negociaciones, los periodistas consiguen embarcar en el buque de la fragata militar italiana *Grecale*, dentro de la operación *Mare Nostrum*, un dispositivo puesto en marcha por el Ministerio de Defensa italiano para evitar una tragedia similar a la ocurrida en Lampedusa. Spottorno consigue documentar con fotografías un rescate en el mar. El resultado es un reportaje de 20 páginas que se publica en *El país semanal*, una extensión mayor de lo habitual en este semanario. El corto-documental realizado paralelamente, titulado *A las puertas de Europa*, gana el premio *World Press Photo 2015* en la categoría *Multimedia*. Este premio supone un incentivo para la idea que ronda en la cabeza de Carlos Spottorno desde hace tiempo: publicar un libro de fotografías sobre las fronteras de Europa. En ese momento, decaen las posibilidades de que el periódico pueda financiar un proyecto de esta naturaleza. Sin embargo, Spottorno, en su condición de *freelance* o autónomo, consigue una *Beca Leonardo* de la *Fundación BBVA* que le va a permitir financiar el reportaje fotográfico soñado. De este modo, la mitad del coste del proyecto que tiene en mente queda sufragada, mientras que *El país* asume los gastos del viaje de Guillermo Abril para la realización de este reportaje.

Transcurre el verano de 2015. Lo que inicialmente había sido un reportaje para *El país semanal* hace florecer la idea de un libro tradicional de fotografía, pero poco a poco esa idea se va transformando a medida que se adentran en lo que ambos definen como "una especie de segunda parte" del reportaje publicado un año y medio atrás en el mencionado diario. Hay un primer viaje a los Balcanes, concretamente a la frontera entre Hungría y Serbia. Después viajarán a otros muchos sitios para ser testigos de la cruda realidad del fenómeno migratorio, de todo lo que ocurre en las fronteras de la Unión Europea. La concepción del futuro libro va cambiando con el paso de los

> El cómic periodístico se ha convertido en un formato idóneo para contar la realidad, donde el periodista es un personaje fundamental que sumerge al lector en su proceso de investigación y en la experiencia vivida

días, hasta que Carlos Spottorno plantea la posibilidad de utilizar las fotografías de manera secuencial, como si se tratara de un cómic, pero aplicando un tratamiento cromático particular a las imágenes:

> "Pensé cómo sería una página con viñetas, me puse a leer cómo hacer un cómic con fotos sin que fuera una telenovela. Y es que si no hacía una intervención cromática característica eso iba a parecer una fotonovela e iría en contra del espíritu que quería darle a ese libro. Tardé bastante en encontrar ese tratamiento cromático. Una vez hecho, ahí está, pero es como fabricar un perfume, utilizar la alquimia hasta dar con lo que funciona. Cuando encontré el tratamiento cromático, me animé a compartirlo con Guillermo" (**Spottorno**, entrevista 5 de abril de 2019).

En noviembre de 2015, el concepto de *La grieta* queda definido. Sus propios autores la catalogan como un cómic periodístico, a medio camino entre la novela gráfica y el fotolibro, que se nutre de las influencias de Joe Sacco, pero sobre todo de Guy Delisle, Robert Crumb o Paco Roca. Sin embargo, como obra de referencia fundamental, los autores citan *El fotógrafo* (**Guibert**; **Lefèvre**; **Lemercier**, 2011).

4. *El fotógrafo*, un referente indispensable en el proceso de creación de *La grieta*

En una entrevista concedida a Alberto García Marcos, uno de los autores de *El fotógrafo*, Emmanuel Guibert, reconoce que trata de escuchar atentamente buenas historias para que el lector pueda escuchar esas mismas historias, es decir, intenta reproducirlas con la mayor fidelidad posible, participando en el relato del modo en que lo hacen Joe Sacco, Étienne Davodeau o Guy Delisle.

> "Pero eso no es lo que yo quiero hacer. Yo quiero que el lector se meta en mi piel. Si mi intención es que se siente en mi silla, yo no puedo estar sentado en ella. Es una conversación entre el lector y el narrador de la historia" (**García-Marcos**, 2013, p. 344).

> *La grieta* supone el ejercicio del periodismo encubierto, una de las modalidades del periodismo de inmersión, donde el reportero oculta su identidad y se infiltra en una comunidad para acceder a una información que, de otro modo, permanecería oculta

Espiña-Barros (2014) insiste también en este aspecto al señalar la manera en que Joe Sacco se distancia de los reporteros que cubren los conflictos internacionales al moverse sin urgencia, al no depender de horarios de cierre y demás, metiéndose de lleno en los acontecimientos para conocerlos de primera mano o por medio de sus protagonistas, situándose al lado de ellos en todo momento. De hecho, una de las características que más se repite en los cómics no ficticios es la autorreferencialidad, uno de los aspectos definitorios del periodismo de inmersión. La subjetividad, por tanto, es un nexo común que llegan a compartir muchas de las obras enmarcadas dentro del periodismo cómic y que queda patente también en *El fotógrafo*, obra que sirve como referencia para *La grieta*, tal y como reconocen sus propios autores (**Spottorno**; **Abril**, entrevista 5 de abril de 2019). En ambas, la narración cobra vida a partir de la visión personal de cada autor, que hace uso de la primera persona, si bien la experiencia vivida por Lefèvre es narrada a posteriori por Emmanuel Guibert, quien toma nota de todo lo ocurrido, se pone en su piel, y selecciona las fotografías que formarán parte de la historia dibujada. Sobre este asunto, el citado escritor y dibujante reconoce que mantuvo horas y horas de conversación con Lefèvre, tomó infinidad de notas, y accedió a todos los manuscritos y archivos digitales del fotógrafo francés para poder recrear la historia. Así habla del proceso de selección de fotografías que más tarde incluyó en el cómic:

> "Yo no quería publicar solamente fotografías que fueran interesantes o satisfactorias en términos de composición o belleza. No me interesaban desde un punto de vista estético. Quería que la historia fuese mi guía, lo cual implicaba que tenía que elegir también fotografías flojas, fotografías fallidas, fotografías malas. Imágenes que nunca escogería el propio fotógrafo. Pero yo las escogí porque eran interesantes" (**García-Marcos**, 2013, p. 345).

En efecto, las imágenes seleccionadas por Guibert cumplen una función documental en *El fotógrafo*, se alternan de manera sincronizada con los dibujos y el texto, y otorgan veracidad al relato, pues son el testimonio visual de todo cuanto se narra. Fotografía y dibujo se unen de manera simbiótica y se apoyan a su vez en la narración textual en primera persona, donde el autor transmite sin fisuras todo cuanto acontece a su alrededor, sus sensaciones, sus expectativas, incluyendo toda la información de contexto que el lector necesita.

Hay numerosos ejemplos a lo largo de la obra que ejemplifican esta relación simbiótica que establecen dibujo, fotografía y texto. La narración es tan cruda como la realidad que pretende mostrar.

Como ya hemos apuntado, los autores de *La grieta* basan su trabajo en la receta empleada en *El fotógrafo*, pero hay diferencias sustanciales que distancian a una obra de otra:

- *La grieta* es un relato narrado en primera persona, en ocasiones en singular y otras en plural, pues se trata de la voz de Guillermo Abril, redactor, protagonista junto a Carlos Spottorno, reportero gráfico, de todo cuanto acontece en el libro. Ambos periodistas han sido testigos directos de lo que narran y lo cuentan a través de esta crónica de inmersión que adopta el aspecto de un cómic. *El fotógrafo* también está escrito en primera persona, pero es Emmanuel Guibert quien, como ya hemos señalado, se pone en la piel de Lefèvre, toma nota de lo ocurrido y narra la experiencia vivida.

Imagen 1. Muestra de una página interior de *El fotógrafo*

Guibert se limita, por tanto, a construir el relato de lo vivido por otro, mientras que, en *La grieta*, ambos autores ejercen como periodistas.

- Se trata de una narración periodística donde todo el texto está recogido en cartelas o cuadros de texto, no se utilizan bocadillos para mostrar las declaraciones o pensamientos de los entrevistados –algo que sí podemos observar en *El fotógrafo*–, sino que se recurre a las habituales citas entrecomilladas del lenguaje periodístico para dar voz a los protagonistas.
- La diferencia más palpable a simple vista se encuentra en el apartado artístico. Más allá de la narración textual, en *El fotógrafo*, dibujo y fotografía se dan la mano para contar una historia. Sin embargo, en *La grieta* las viñetas están compuestas única y exclusivamente por fotografías, imágenes reales sometidas posteriormente a un tratamiento cromático digital. Una decisión de carácter técnico que a posteriori ha supuesto el mayor elemento de diferenciación respecto a otras obras enmarcadas dentro del periodismo cómic.

Así lo explica el reportero gráfico Carlos Spottorno:

> "Yo buscaba que el lector sintiera algo parecido a lo que siente cuando abre una novela gráfica. Una misma historia en contextos diferentes se lee de manera distinta. Además, he procurado eliminar la profundidad en cada fotografía para que parecieran más un dibujo. En muy pocas ocasiones hay pérdida de foco, está todo enfocado, como en los dibujos" (**Spottorno**, 5 de abril de 2019).

Una de las primeras decisiones creativas fue que el relato estuviera escrito en primera persona y de manera cronológica. No había un guion previo, sino que los hechos querían mostrarse del modo y en el momento en que fueran sucediéndose. Las fotografías realizadas eran una importante limitación para construir el relato, tal y como reconoce el propio Spottorno:

> "En un cómic tú puedes dibujar lo que quieras, pero aquí el material gráfico es limitado, tenemos las fotos que tenemos. Por ello, no hubiera sido práctico escribir un guion y luego tratar de ilustrarlo, pues nos habríamos encontrado con que no había con qué ilustrar. Entonces procedimos al revés. Hay un guion visual que responde a las memorias compartidas, un orden fotográfico. Guillermo lo comprueba y dialogamos para que ese mensaje se entienda. Y ahí entra él a dar vida a esas fotos" (**Spottorno**, entrevista 5 de abril de 2019).

En los diversos viajes realizados para dar vida a este trabajo, Carlos Spottorno tomó 25.000 fotografías y Guillermo Abril completó 15 cuadernos de apuntes que sirvieron como materia prima para la obra. Así lo explica el autor de los textos:

> "Me costó muchísimo escribir el primer cuadro de texto, para fijar el tono, el tiempo verbal, el uso de la primera persona… Después se convirtió en algo adictivo: tener imágenes a las que vas dando vida y tratando de crear tensión e interés continuo en el lector" (**Abril**, entrevista 5 de abril 2019).

Ambos reconocen que la gran motivación para crear *La grieta* era llegar al público mediante otros formatos, situando los acontecimientos y explicando por qué ocurren, informando pero sin obviar que el lector puede desconocer el contexto de todo lo que está ocurriendo.

El punto de partida de *La grieta* es un preámbulo en el que se define el concepto de Europa, desde su gestación a finales de la Segunda Guerra Mundial hasta un suceso concreto que tiene lugar en octubre de 2013 frente a las costas de Lampedusa, donde mueren ahogadas 366 personas que viajaban a borde de una patera. Se trata de invitar al lector a una reflexión que se irá repitiendo a lo largo de la obra: mostrar las fisuras que esconde Europa.

5. Éxito y repercusión de un periodismo cómic innovador

La Grieta fue galardonada en 2017 con el premio *Atomium* concedido por la *Fiesta del cómic* de Bruselas. El jurado, presidido por el autor francés Jean-David Morvan, indicó:

> "Esta aventura humana artística y conmovedora revoluciona los códigos del cómic-reportaje" (*EFE*, 2017).

Ese mismo año recibió la Mención especial del jurado en los *Aperture Foundation Photobooks Awards*, y estuvo seleccionada entre los mejores libros de fotografía en los premios *PhotoEspaña* y *Kassel Photobook*. La obra ha sido traducida al alemán, francés, italiano y japonés.

Esta particular manera de mezclar técnicas del cómic y del periodismo, combinando texto y fotografías, supone una nueva fórmula narrativa que, con posterioridad a la publicación de *La grieta*, ha vuelto a emplearse en dos reportajes que han visto la luz en *El país semanal*:

Imagen 2. Muestra de una doble página interior de *La grieta*

- el primero de ellos versaba sobre el cohete comercial *Ariane 5* y fue publicado en esta revista en 2017 bajo el título *Objetivo: Europa*.
- el segundo reportaje con este singular formato de periodismo cómic, *Palmira. El otro lado*, fruto de la colaboración entre *El país* y *Süddeutsche zeitung magazin*, fue publicado en 2018 y contó con una versión en papel y otra digital. Dicho trabajo fue galardonado con el *European Press Prize 2019* en la categoría de *Innovación*.

Asimismo, ha servido de inspiración a Nicolas Lozito para publicar varios reportajes de similar naturaleza en el diario italiano *La stampa.* A su vez, Spottorno y Abril convirtieron el reportaje *La batalla del Mediterráneo*, publicado en *El país semanal*, en un cómic periodístico que vio la luz en el suplemento *La lettura* del *Corriere della sera* en 2018. Por otra parte, un comisario de arte en Austria se interesó por esta innovadora forma de narrar historias y propuso a sus autores la confección de un cómic periodístico pensado específicamente para ser expuesto en las paredes de una sala de exposiciones. El resultado es una historia sobre la región de El Tirol que se iba a mostrar al público en Innsbruck el 31 de marzo de 2020 pero que hubo de ser pospuesta a raíz de las medidas de confinamiento decretadas para evitar la propagación del virus Covid-19 (**Spottorno**, entrevista 3 de abril de 2020).

6. Resultados

Una vez descrito el proceso de creación y contenido de *La grieta* (O1), procedemos a determinar si la obra reúne cada una de las características propias del periodismo cómic enumeradas en el apartado 1.2 (O2).

En primer lugar, sus dos autores están presentes dentro de la acción, forman parte del relato y ofrecen su mirada sobre los acontecimientos reivindicando en todo momento la subjetividad. Pese a no estar presentes explícitamente dentro de las viñetas, su presencia queda patente en el uso de la primera persona en los textos, lo que denota su papel como testigos directos de lo que ocurre. Todo lo que se puede ver y leer en este cómic forma parte de un proceso largo de planificación y trabajo, donde cada página ha sido minuciosamente confeccionada seleccionando entre más de 25.000 fotografías tomadas por Carlos Spottorno y las anotaciones realizadas por Guillermo Abril en 15 libretas. Es, por tanto, una obra reposada, alejada de la inmediatez, donde los periodistas han contado con una nutrida variedad de fuentes. La entrevista ha sido un instrumento fundamental para obtener datos y opiniones con los que construir la narración. Su hibridación con los medios audiovisuales ha quedado patente en cada página, con la secuenciación del relato en viñetas constituidas por fotografías sometidas a un tratamiento digital específico, con el fin de darles un aspecto similar al de un dibujo. La obra asimila las características propias de la crónica de inmersión, lo cual ofrece una sensación de veracidad similar a la de los relatos periodísticos que encontramos en los medios convencionales. El uso de fotografías como elemento gráfico conductor otorga un mayor realismo y cercanía a la historia. La elaboración de *La grieta* ha ido precedida de una importante labor de documentación y producción, donde los autores han acudido al lugar del acontecimiento para conseguir declaraciones de los protagonistas reales, poniendo en práctica un método de trabajo no similar al de los periodistas, sino precisamente desarrollado por periodistas. Dicho de otro modo, dos periodistas han utilizado técnicas propias del cómic para contar una historia real, dando lugar a este producto transmediático que hibrida dos lenguajes. Por todo ello, podemos afirmar que *La grieta* reúne las características propias del periodismo cómic.

Por otra parte, integra todas las características del periodismo de inmersión previamente definidas en este estudio (O3). Para hacer realidad esta obra, sus autores –ambos periodistas de profesión– se han introducido en diferentes lugares, comunidades y situaciones, interactuando con los habitantes de cada uno de esos microespacios: conviviendo con inmigrantes en un campamento al otro lado de la verja de Melilla, con militares a bordo de la fragata *Grecale* o en los ejercicios que la *OTAN* realiza en la frontera de Lituania con Bielorrusia, por citar algunos ejemplos. Han experimentado numerosas situaciones en su propia piel, lo que les ha permitido comprender mejor aquello de lo que quieren hablar y hacerlo con un elevado grado de subjetividad, adaptando su relato a las características propias de la crónica. Los periodistas han recurrido a fuentes oficiales de difícil acceso no sólo para cualquier ciudadano, sino para los profesionales de la información en su día a día. Han accedido a ellas tras arduas gestiones burocráticas en las que han empleado decenas de horas y han puesto en práctica su capacidad negociadora. Pero también han podido contar con testimonios relevantes de habitantes anónimos de dichos lugares. Como periodistas con una marcada conciencia social, han asumido determinados riesgos y se han visto expuestos a ciertas situaciones de tensión y peligro: desobedeciendo a las autoridades policiales y militares al subir al monte Gurugú para conocer los asentamientos de personas dispuestas a saltar la verja, o en una zona vedada cerca de Orestiada (Grecia), donde ocultan una cámara fotográfica y se ven obligados a borrar las fotografías de su cámara principal por imperativo de las fuerzas militares, bajo la amenaza de ser llevados al calabozo. De alguna manera, el miedo está presente siempre en su trabajo. Un trabajo prolongado en el tiempo y que se ha materializado precisamente en un libro, como suele ser habitual en el periodismo de inmersión.

El cuarto objetivo (O4) tenía como punto de partida *El fotógrafo* en la medida en que se trata de la primera vez que una obra de periodismo cómic incorpora la fotografía como parte del relato. Los propios autores de *La grieta* han reconocido esta fuente de inspiración, pero las diferencias entre una y otra obra han quedado patentes en el apartado 4. Puesto que el uso de la fotografía es el de-

> En *La grieta* no hay dibujos, las viñetas están compuestas única y exclusivamente por fotografías, imágenes reales sometidas posteriormente a un tratamiento cromático digital

nominador común de ambos libros, hemos de remarcar que, en el primero de los casos, las fotografías tienen un papel complementario dentro del relato, funcionan como un documento visual que prueba la presencia de Didier Lefèvre en Afganistán, han sido utilizadas a posteriori teniendo en cuenta su valor documental por encima del estético, y sirven como complemento al dibujo. En *La grieta*, sin embargo, las fotografías constituyen cada una de las viñetas del cómic y son fruto de una sesuda planificación que comienza prácticamente en el mismo momento en que surge la idea de crear la obra. Dejar de inmortalizar un momento en el lugar de los acontecimientos supone no disponer de una imagen y, por tanto, no poder contarlo. Aquí cada fotografía tiene un valor narrativo y estético, además de documental. Y esas fotografías han sido sometidas a un tratamiento cromático especial que, en cierta manera, las acercan al aspecto de un dibujo. Por primera vez, una obra enmarcada dentro del periodismo cómic utiliza únicamente la fotografía –una para cada viñeta– para contar una historia, prescindiendo del dibujo.

> La particular manera en que *La grieta* mezcla técnicas del cómic y del periodismo, combinando texto y fotografías, es una nueva fórmula narrativa que podríamos denominar fotocómic periodístico

Con todo lo visto, podemos afirmar que nos encontramos ante una obra del periodismo cómic en la que cada viñeta está compuesta por una fotografía (O5). Pese a que *El fotógrafo* ya había empleado este elemento a nivel narrativo, *La grieta* supone un paso adelanto al hacer un uso exclusivo de este componente visual, prescindiendo del dibujo. El tratamiento cromático al que son sometidas cada una de las fotografías muestra claramente la intencionalidad de los autores de dotar a la obra de un aspecto similar al de un cómic dibujado, manteniendo el realismo intrínseco de cada escena fotografiada. Teniendo en cuenta estos aspectos, podemos afirmar que nos encontramos ante una nueva modalidad de periodismo cómic que ha despertado el interés de artistas, periodistas y medios de comunicación internacionales, por lo que proponemos la denominación de "fotocómic periodístico" para todas las obras de similar naturaleza que puedan ver la luz en los próximos años.

7. Discusión y conclusiones

El cómic periodístico se ha convertido en un formato idóneo para contar la realidad, donde el periodista es un personaje fundamental que sumerge al lector en su proceso de investigación y en la experiencia vivida, dentro de un relato extenso y profundo que invita a reflexionar acerca de si existe una verdad objetiva (**González-Cabeza**, 2017). Se trata de un género que nace dentro de las nuevas narrativas transmediáticas, fruto de la hibridación del lenguaje del cómic y del periodismo. Desde la publicación de *Maus* (**Spiegelman**, 2010), obra merecedora del premio *Pulitzer* en 1991, el periodismo cómic ha ido adquiriendo una identidad propia dentro del terreno de la novela gráfica o del cómic de no ficción. El tono autobiográfico empleado por Art Spiegelman es el de un dibujante interesado en hablar de la realidad. Como él, otros historietistas han estado presentes en sus obras de una u otra forma en los últimos 40 años, como reivindica **Campbell** (2013). Pero es Joe Sacco quien reúne las cualidades de un gran artista gráfico y un buen periodista para alzarse como el máximo exponente del periodismo cómic (**Espiña-Barros**, 2014). A partir de aquí, este nuevo género periodístico (**Matos-Agudo**, 2015, p. 272) ha empezado a generar un lenguaje informativo propio, recogiendo virtudes híbridas del reportaje, de la crónica y de la entrevista, con las propias técnicas y fórmulas visuales de las viñetas y sumando algunas soluciones iconográficas de los productos visuales. A este respecto, *El fotógrafo* abre nuevas vías de experimentación narrativa al incorporar la fotografía a las viñetas y otorgar un mayor realismo al relato (**Melero-Domingo**, 2012, p. 546). *La grieta* es un paso adelante en esta línea al utilizar exclusivamente imágenes reales para plasmar un relato, prescindiendo de cualquier tipo de dibujo. En esta ocasión, y a diferencia de otras obras de similar naturaleza, son dos periodistas quienes se interesan por el cómic como el mejor formato para construir su narración y llegar a nuevos públicos. Se trata de una crónica de inmersión, una historia vivida en primera persona, sustentada en un proceso previo de documentación e investigación, que los lleva a visitar diferentes lugares y ambientes en los que toman 15 cuadernos de apuntes y 25.000 fotografías para dar forma a un relato repleto de datos, anécdotas y reflexiones. Las imágenes son sometidas a un proceso de tratamiento cromático, único hasta la fecha, que les otorga un aspecto similar al de un dibujo. Durante el proceso de creación, prolongado en el tiempo, sus autores han vivido situaciones de tensión y riesgo en su afán por dar a conocer determinadas realidades. Y todo ello ha quedado reflejado de manera subjetiva pero honesta en este libro, un formato habitual para trabajos similares incluidos dentro del periodismo de inmersión.

Carlos Spottorno y Guillermo Abril enmarcan su obra dentro del género del periodismo cómic, si bien los rasgos diferenciadores aquí señalados podrían servir para definir *La grieta* como un "fotocómic periodístico", dado que la fotografía es la principal materia prima de la que se nutre. El hecho de renunciar al dibujo como recurso complementario dificulta el proceso de creación y lo limita en todo momento, despojando a la obra de cualquier elemento de ficción y otorgándole un carácter netamente periodístico. El carácter innovador de *La grieta* y su repercusión internacional es un paso adelante para el periodismo cómic, como ha quedado demostrado, y abre interesantes vías de exploración en las nuevas narrativas periodísticas.

8. Referencias

Campbell, Eddie (2013). "La autobiografía en el cómic. Una muy breve introducción a un tema muy extenso, visto desde una bicicleta en marcha". En: García, Santiago (coord.). *Supercómic. Mutaciones de la novela gráfica contemporánea*. Madrid: Errata Naturae Editores, pp. 25-38. ISBN: 978 84 15217 44 2

Castillo-Vidal, Jesús (2004). “Fundamentos teóricos del análisis de contenido en la narración secuencial mediante imágenes fijas: el cómic”. *El profesional de la información*, v. 13, n. 4, pp. 248-271.
http://profesionaldelainformacion.com/contenidos/2004/julio/1.pdf

Contreras, Delia (2020). El cómic cubano a lo largo de la historia: su papel en la consolidación del poder político y como instrumento de subversión. *Historia y comunicación social*, v. 25, n. 1, pp. 15-26.
https://doi.org/10.5209/hics.69222

Domínguez, Eva (2913). *Periodismo inmersivo. La influencia de la realidad virtual y del videojuego en los contenidos informativos*. Barcelona: Editorial UOC. ISBN: 978 84 9029 776 6

EFE (2017). “Bruselas premia el cómic sobre los refugiados de Spottorno y Guillermo Abril”. *eldiario.es*, 1 septiembre.
https://www.eldiario.es/cultura/Bruselas-refugiados-Spottorno-Guillermo-Abril_0_682082543.html

Eiroa, Matilde; **Barranquero, Alejandro** (2017). *Métodos de investigación en la comunicación y sus medios*. Madrid: Síntesis. ISBN: 978 84 90774724

Espiña-Barros, Diego (2014). “Apuntes a Notas al pie de Gaza. El cómic periodístico de Joe Sacco”. *Cuco, Cuadernos de cómic*, n. 2, pp. 92-108.
http://cuadernosdecomic.com/docs/revista2/Apuntes_a_Notas_al_pie_Gaza_cuco2.pdf

García, Santiago (2013). “Después del cómic. Una introducción”. En: García, Santiago (coord.). *Supercómic. Mutaciones de la novela gráfica contemporánea*. Madrid: Errata Naturae Editores. ISBN: 978 84 15217 44 2

García-Marcos, Alberto (2013). “El hombre tranquilo y las pequeñas cosas. Entrevista con Enmanuel Gibert”. En: García, Santiago (coord.). *Supercómic. Mutaciones de la novela gráfica contemporánea*. Madrid: Errata Naturae Editores. ISBN: 978 84 15217 44 2

González-Cabeza, Inés (2017). “Crímenes contra la humanidad en el cómic periodístico de Joe Sacco: El caso de *Días de destrucción, días de revuelta*”. *Estudios humanísticos. Filología*, n. 39, pp. 55-73.
https://doi.org/10.18002/ehf.v0i39.5078

Guibert, Emmanuel; **Lefèvre, Didier**; **Lemercier, Frédéric** (2011). *El fotógrafo.* Madrid: Ediciones Sinsentido. ISBN: 978 84 96722 94 1

Irala-Hortal, Pilar (2014). “Nuevas narrativas en el periodismo actual. El periodismo narrativo”. *Estudios sobre el mensaje periodístico*, v. 20, n. 1, pp. 147-158.
https://revistas.ucm.es/index.php/ESMP/article/view/45224

Jenkins, Henry (2007). “Transmedia storytelling 101”. *Confessions of an aca-fan*, 21 marzo.
http://henryjenkins.org/blog/2007/03/transmedia_storytelling_101.html

López-Hidalgo, Antonio (2018). *El periodismo que contará el futuro*. Salamanca: Comunicación Social Ediciones y Publicaciones. ISBN: 978 84 17600 01 03

López-Hidalgo, Antonio; **Fernández-Barrero, María-Ángeles** (2013). *Periodismo de inmersión para desenmascarar la realidad*. Salamanca: Comunicación Social Ediciones y Publicaciones. ISBN: 978 84 15544 34 0

Matos-Agudo, Diego (2015). *El cómic periodístico. De Art Spiegelman a Joe Sacco*. Tesis doctoral. Universidad Pontificia de Salamanca.
https://dialnet.unirioja.es/servlet/tesis?codigo=62849

Matos-Agudo, Diego (2017). *Periodismo cómic. Una historia del género desde los pioneros a Joe Sacco*. Salamanca: Comunicación Social Ediciones y Publicaciones. ISBN: 978 84 15544 63 0

Melero-Domingo, Javier (2012). “‘*Footnotes in Gaza*’. El cómic-reportaje como género periodístico”. *Estudios sobre el mensaje periodístico*, v. 18, n. 2, pp. 541-561.
https://revistas.ucm.es/index.php/ESMP/article/view/41031

Moloney, Kevin (2011). “Transmedia journalism in principle”. *Transmedia Journalism*, 23 Nov.
https://transmediajournalism.org/2011/11/23/transmedia-journalism-in-principle

Sacco, Joe (2006). *Gorazde: zona protegida*. Barcelona: Editorial Planeta DeAgostini. ISBN: 978 84 395 0421 4

Sacco, Joe (2010). *Notas al pie de Gaza*. Barcelona: Random House Mondadori. ISBN: 978 84 397 2252 6

Spiegelman, Art (2010). *Maus*. Barcelona: Random House Mondadori. ISBN: 978 84 397 2071 3

Spottorno, Carlos; **Abril, Guillermo** (2016). *La grieta*. Bilbao: Astiberri Ediciones. ISBN: 978 84 16251 86 5

Uso institucional de *Twitter* para combatir la infodemia causada por la crisis sanitaria de la Covid-19

Institutional use of *Twitter* to combat the infodemic caused by the Covid-19 health crisis

Marta Pulido-Polo; Víctor Hernández-Santaolalla; Ana-Alicia Lozano-González

Cómo citar este artículo:

Pulido-Polo, Marta; **Hernández-Santaolalla, Víctor**; **Lozano-González, Ana-Alicia** (2021). "Uso institucional de *Twitter* para combatir la infodemia causada por la crisis sanitaria de la Covid-19". *Profesional de la información*, v. 30, n. 1, e300119.

https://doi.org/10.3145/epi.2021.ene.19

Artículo recibido el 03-11-2020
Aceptación definitiva: 28-01-2021

Marta Pulido-Polo
https://orcid.org/0000-0001-5504-0438

Universidad de Sevilla
Facultad de Comunicación
Av. Américo Vespucio, s/n.
41092 Sevilla, España
martapulido@us.es

Víctor Hernández-Santaolalla
https://orcid.org/0000-0002-2207-4014

Universidad de Sevilla
Facultad de Comunicación
Av. Américo Vespucio, s/n.
41092 Sevilla, España
vhsantaolalla@us.es

Ana-Alicia Lozano-González
https://orcid.org/0000-0002-0725-5511

Centro Universitario San Isidoro
Universidad Pablo de Olavide
Leonardo Da Vinci, 17-B.
41092 Sevilla, España
alozano@centrosanisidoro.es

Resumen

La crisis sanitaria internacional provocada por la Covid-19, más grave que las provocadas por el SARS, el MERS, la Gripe A y el Ébola, supone un desafío sin precedentes para las instituciones de todo el mundo. El objetivo principal de este trabajo es analizar el comportamiento institucional a través de *Twitter* para determinar si es posible inferir un modelo eficaz de comunicación institucional de crisis online de aplicación en contextos más amplios. En este sentido, se establece un diseño metodológico cuantitativo, sustentado en el análisis de contenido sobre un corpus de 995 mensajes emitidos durante el primer estado de alarma por las cuentas oficiales de *Twitter* de las instituciones oficiales al cargo de la gestión de la crisis sanitaria de la Covid-19 en España: @sanidadgob (483 tweets), @mitmagob (154 tweets), @defensagob (263 tweets) e @interiorgob (95 tweets). Los resultados muestran un predominio de mensajes de empatía y seguridad (60,40%); una distribución estable de tweets por día, concentrándose el 88,74% de los mismos entre las 10:00 y las 20:59 horas; un uso comedido de recursos audiovisuales (32,26%) con un enfoque eminentemente informativo (96,18%); diferencias significativas según el estadístico chi-cuadrado con respecto al formato ($\chi^2_{(12)} = 606{,}066$; $p < 0{,}001$) y el enfoque ($\chi^2_{(3)} = 36{,}084$; $p < 0{,}001$) en función de la cuenta analizada, y una destacada tasa de *engagement* adscrita al *Ministerio de Sanidad* (68,96%). Estos resultados evidencian que *Twitter* permite aplicar un modelo de comunicación institucional online, de fácil transferencia al contexto internacional, que sugiere una estrategia de relaciones públicas sustentada en la transparencia informativa y el goteo informativo constante.

Palabras clave

Infodemia; Contexto internacional; Comunicación institucional; Gobierno de España; Twitter; Gestión de crisis; Covid-19; Coronavirus; SARS-CoV-2; Relaciones públicas; *Engagement*; Confianza; Transparencia informativa.

Abstract

The international health crisis caused by Covid-19, more serious than those caused by SARS, MERS, influenza A, and Ebola, poses an unprecedented challenge for all institutions around the world in combating the infodemic. The main objective of this work is to analyze institutional behavior through *Twitter* to determine whether it is possible to deduce an effective institutional online crisis communication model that is applicable in wider contexts. In this sense, a quantitative methodological design is established based on content analysis performed on a simple of 995 tweets from the official *Twitter* accounts of institutions in charge of managing the health crisis during the first state of alarm in Spain: @sanidadgob (483 tweets), @mitmagob (154 tweets), @defensagob (263 tweets), and @interiorgob (95 tweets). The results illustrate a predominance of empathetic and security-related messages (60.40%); a stable distribution of tweets per day, with 88.74% of them published between 10:00 and 20:59; a moderate use of audiovisual resources (32.26%) with a very informative approach (96.18%); a few significant differences according to the chi-squared statistic with respect to the format ($\chi^2_{(12)} = 606.066$; $p < 0.001$) and approach ($\chi^2_{(3)} = 36.084$; $p < 0.001$) depending on the accounts analyzed; and a substantial level of engagement with the Spanish *Ministry of Health*'s account (68.96%). These results demonstrate that *Twitter* allows the application of an online institutional communication model that is easily transferable to an international context, suggesting a public relations strategy based on information transparency and constant information flow.

Keywords

Infodemic; International context; Institutional communication; Government of Spain; *Twitter*; Crisis management; Covid-19; Coronavirus; SARS-CoV-2; Public relations; Engagement; Trust; Information transparency.

1. Introducción

La crisis sanitaria generada por la Covid-19, más compleja, amplia y grave que las anteriores, pone de relieve el compromiso público y la capacidad de respuesta gubernamental a nivel internacional (**Liao** *et al.,* 2020), así como la responsabilidad de las instituciones de todo el mundo de gestionar adecuadamente la comunicación con su ciudadanía desde

> "la transparencia, la coherencia, el entendimiento con los distintos *stakeholders*, el liderazgo y la divulgación" (**Costa-Sánchez**; **López-García**, 2020, p. 11).

Estamos ante una situación sin precedentes que rompe con los modelos de gestión comunicativa de las crisis (**Xifra**, 2020) y en la que resulta esencial la intervención de las partes implicadas para aprovechar el poder de las redes sociales con el objetivo de divulgar información fiable y poner freno a la alarmante propagación de desinformación médica y contenido no verificable que se ha difundido sobre la Covid-19 (**Kouzy** *et al.*, 2020).

Tal y como establece la *Organización Mundial de la Salud*, en adelante *OMS*, si algo hemos aprendido después de los brotes de SARS, MERS, Gripe A (H1N1) y Ébola es que la comunicación de crisis y de compromiso con la comunidad (CCCC)[1] es fundamental para el éxito de este tipo de emergencias sanitarias, ya que la Covid-19

> "desafía los sistemas de salud pública y su capacidad para comunicarse eficazmente con su población. La falta de comunicación lleva a la pérdida de confianza y reputación, impacto económico y, en el peor de los casos, la pérdida de vidas" (*World Health Organization*, 2020, p. 1).

En este sentido, el 19 de marzo de 2020, la *OMS* realizó un llamamiento a los líderes mundiales para garantizar que la gestión institucional de la comunicación de crisis fuera un componente esencial en la preparación y respuesta a esta emergencia sanitaria y, además de proporcionar pautas concretas de actuación (tabla 1), advirtió a los gobiernos sobre la importancia de gestionar la CCCC para:

- salvar vidas y minimizar las consecuencias adversas;
- ayudar a prevenir la infodemia y generar confianza en la respuesta institucional;
- aliviar la confusión y evitar malentendidos;
- garantizar el derecho de la población a estar informada y a comprender los riesgos a los que está expuesta;
- minimizar las divergencias acerca de la percepción del riesgo;
- adaptar conocimientos científicos complejos haciéndolos accesibles a la población para que los entiendan y confíen en ellos;
- involucrar a las comunidades en el control de los brotes y garantizar que tomen medidas de protección;
- vigilar y notificar casos, rastrear contactos, cuidar enfermos, prestar atención clínica y proporcionar apoyo a las necesidades logísticas que se requieran, y
- minimizar la disrupción social y proteger no sólo la salud, sino también el empleo, el turismo y la economía.

Desde el primer momento de la pandemia, el comportamiento comunicacional del Gobierno de España ha sido activo, ofreciendo datos actualizados a través de todo tipo de soportes y aplicaciones para hacer llegar la información a los ciudadanos, practicando la transparencia y una gestión pública positiva. Y es que

> "la estrategia del discurso institucional seguida por el Gobierno persigue establecer un canal directo con la ciudadanía, interesada en recibir información sobre la situación y conocer los diversos escenarios de la actualidad" (**Castillo-Esparcia**; **Fernández-Souto**; **Puentes-Rivera**, 2020, p. 3).

Es aquí donde *Twitter* se revela como un eficaz instrumento de gestión de la comunicación institucional (**Caldevilla-Domínguez**; **Rodríguez-Terceño**; **Barrientos-Báez**, 2019; **Rodríguez-Fidalgo**; **Ruiz-Paz**; **Paíno-Ambrosio**, 2019; **Gong**; **Lane**, 2020), especialmente durante el Estado de alarma para el Gobierno de España, y donde radica el interés de nuestro estudio.

> La crisis sanitaria internacional provocada por la Covid-19 es un desafío sin precedentes para las instituciones de todo el mundo

El éxito institucional de *Twitter*, a nivel nacional e internacional, se sustenta en su capacidad universal de generar con la ciudadanía un sistema de comunicación dialógico (**Sáez-Martín**; **Haro-de-Rosario**; **Caba-Pérez**, 2015) eficaz, directo y ágil (**Pérez-Gabaldón**; **Nicasio-Varea**, 2019; **Segura-Mariño**; **Paniagua-Rojano**; **Fernández-Sande**, 2020). Se convierte así en un excepcional canal informativo gubernamental para compartir y consumir información relevante (en tiempo real) en situaciones de crisis provocadas por desastres y emergencias (**Akar**; **Muraki**, 2011; **Burton** *et al.*, 2012; **Chatfield**; **Scholl**; **Brajawidagda**, 2013; **Spence** *et al.*, 2015; **Lachlan** *et al.*, 2019; **Pourebrahim** *et al.*, 2019; **Edo-Osagie** *et al.*, 2020) y combatir la infodemia.

Tabla 1. Etapas de actuación en la gestión de CCCC para países con transmisión de la Covid-19 en curso

Etapa	Acciones
1. Sistemas de comunicación de riesgos	Fortalecer la capacidad de respuesta de comunicadores y expertos en participación comunitaria. Desarrollar, actualizar continuamente y compartir estrategias de comunicación de crisis y de compromiso con la comunidad (CCCC) atendiendo a las necesidades de respuesta requeridas. Monitorear las campañas de CCCC.
2. Coordinación interna y con agentes colaboradores	Fortalecer el compromiso con los agentes colaboradores para: - Compartir información de forma continua para evitar desvíos incoherentes y potencialmente conflictivos. - Diversificar canales relevantes para la difusión de mensajes importantes relativos a la salud. - Obtener nuevas audiencias mediante la elaboración de materiales de comunicación. - Beneficiarse de los recursos humanos y financieros de terceros. - Publicar materiales de manera conjunta según corresponda (por ejemplo, comunicados de prensa, informes de situación, guías de protección de la salud). - Ampliar el alcance de las actividades de participación comunitaria utilizando las fortalezas y oportunidades que ofrecen los colaboradores.
3. Comunicación pública	Identificar portavoces en función de su credibilidad ante la población, el tipo de mensaje que se debe transmitir y la gravedad de la situación. Asegurarse de que los mensajes sean coherentes en todos los sectores y niveles. Compartir información con regularidad (lo ideal sería todos los días a la misma hora). Hacer partícipe a la población del liderazgo y la toma de decisiones con argumentos claros. Compartir historias, fotos y vídeos que ilustren mensajes clave. Asegurarse de que el público sepa dónde obtener información actualizada con regularidad (por ejemplo, sitios web, prensa, sesiones informativas, etc.). Proporcionar una comunicación regular y transparente a través de los canales utilizados por nuestras audiencias. Utilizar medios tradicionales, internet y redes sociales, líneas directas y mensajes de texto según corresponda.
4. Compromiso con la comunidad	Mantener una comunicación bidireccional con las audiencias afectadas para comprender y responder a sus preocupaciones, actitudes, creencias y barreras para seguir las directrices sanitarias a través de mecanismos como: - Líneas directas operadas por estudiantes de medicina, que pueden responder llamadas y participar en las redes sociales, y - Programas de radio en los que se proporciona información y el público puede hacer preguntas. Realizar un seguimiento de las personas afectadas para asegurarse de que sigan las recomendaciones sanitarias e identificar las barreras para que se comprometan con las medidas de protección. Interactuar con *influencers*, principalmente sanitarios, para comunicarse con las poblaciones afectadas, especialmente los que son difíciles de alcanzar. Establecer un *feedback* consistente entre la población y el equipo de emergencias sanitarias, para adecuar de forma efectiva sus repuestas a las necesidades concretas de protección sanitaria que requiere la población.
5. Abordar la incertidumbre y la percepción y gestión de la desinformación	Establecer un *feedback* periódico y capturar preguntas, malentendidos y desinformación comunes a través de líneas directas, sanitarios y la población. Asegurarse de que los resultados del seguimiento de las redes sociales y los medios tradicionales se evalúen rápidamente a través del equipo específicamente creado para este propósito. Interactuar con *influencers* para captar las percepciones de las personas a través de sus comentarios. Preparar una guía de acuerdo con las percepciones y preocupaciones de la población, y difundirla en diferentes canales de información.
6. Creación de competencias	Asegurarse de que se comparte con el personal de respuesta de emergencias sanitarias una terminología y mensajes clave claros. Actualizar las competencias del personal de respuesta de CCCC a medida que se implementan nuevas metodologías y campañas. Considerar la formación de líderes, personal de respuesta y portavoces sobre la evolución de la CCCC según sea necesario.

Fuente: Elaborado a partir de *World Health Organization* (2020, p. 4-5).

2. La infodemia y *Twitter*

La Covid-19 ha ocasionado grandes desafíos relacionados con la gestión y la difusión de la información (**Aleixandre-Benavent**; **Castelló-Cogollos**; **Valderrama-Zurián**, 2020): a la avalancha de (des)información, se ha unido un incremento ingente en el consumo de información por parte de la población (**Casero-Ripollés**, 2020). Sólo entre el 14 y el 19 de marzo se publicó el triple de noticias que a principios de marzo (**Lázaro-Rodríguez**; **Herrera-Viedma**, 2020). De hecho, las publicaciones surgidas en los últimos meses revelan el interés académico internacional del fenómeno de la infodemia causada por la Covid-19 (**Mavragani**, 2020a; **Higgins** *et al.*, 2020; **Cousins** *et al.*, 2020; **Hernández-García**; **Giménez-Júlvez**, 2020; **Park**; **Park**; **Chong**, 2020; **Rovetta**; **Bhagavathula**, 2020; **Solomon** *et al.*, 2020).

Aunque es la *OMS* quien devuelve a la actualidad el término infodemia (pandemia informativa), en referencia al exceso de información no verificada en internet y redes sociales sobre la Covid-19, el primer estudio sobre epidemiología de la (des)información en materia de salud pública en la Red es el publicado en 1996 por Davison (**Eysenbach**, 2002). Y, con posterioridad, ha sido ampliamente tratado en la bibliografía académica desde una perspectiva clínica (**Eysenbach**, 2006; 2009; 2020; **Chan**; **Ho**; **Lam**, 2013; **Mahoney** *et al.*, 2015; **Radin**; **Sciascia**, 2017; **Mavragani**; **Ochoa**, 2019; **Mavragani**, 2020b; **Schillinger**; **Chittamuru**; **Ramírez**, 2020). En concreto, las implicaciones de *Twitter* con la infodemia han sido revisadas por **Velardi** *et al.* (2014); **Zeraatkar** y **Ahmadi** (2018) y **Liu**, **Chen** y **Kuo** (2019), destacando especialmente el estudio de **Chew** y **Eysenbach** (2010) sobre la incidencia que tuvo *Twitter* durante la pandemia de Gripe A.

En este contexto, durante la crisis sanitaria provocada por la Covid-19, *Twitter* está jugando un papel decisivo que pivota entre su capacidad para favorecer la desinformación y la difusión de información médica relevante (**Rosenberg**; **Syed**; **Rezaie**, 2020). Si es adecuadamente gestionada, esta red social puede convertirse en una importante herramienta institucional para la lucha contra la desinformación dada su capacidad para conectar a las instituciones oficiales con los ciudadanos (y viceversa) de manera rápida y directa (**McGravey**, 2020). De hecho, *Twitter* ha permitido a las instituciones publicar "refutaciones específicas sobre los mitos más recurrentes y perjudiciales" en torno a la crisis sanitaria provocada por la Covid-19 (**Aleixandre-Benavent**; **Castelló-Cogollos**; **Valderrama-Zurián**, 2020).

> El 19 de marzo de 2020, la *OMS* realizó un llamamiento a los líderes mundiales para dar respuesta a la emergencia sanitaria de la Covid desde la gestión institucional de la comunicación de crisis

3. Comunicación institucional, relaciones públicas y *Twitter*

Las redes sociales ofrecen a las organizaciones un canal único para construir y mantener relaciones interactivas fluidas (**Wigand**, 2010) con sus públicos (**Killian**; **McManus**, 2015; **McCann**; **Barlow**, 2015), permitiendo gestionar las interrelaciones entre las instituciones públicas y la sociedad (**Yi**; **Oh**; **Kim**, 2013), tal y como se propugna desde la perspectiva relacional de las relaciones públicas (**Ledingham**; **Brunning**, 1998; 1999; **Ledingham**, 2001; 2003).

En el contexto actual, la comunicación es eminentemente digital (**Pătruţ**, 2015) y viene determinada no sólo por el contenido y los usuarios, sino también por las tecnologías existentes (**Keïnanen**; **Kuivalainen**, 2015). De esta forma, si bien internet ha contribuido a potenciar el uso de la comunicación online (**Jayarama**; **Manraib**; **Manraib**, 2015), las redes sociales se han convertido en plataformas de comunicación estratégica (**Guesalaga**, 2016) que han creado interesantes desafíos para los profesionales de la comunicación organizacional (**Evans**; **Twomey**; **Talan**, 2011).

Twitter se afianza como la red social más utilizada por gobiernos e instituciones de todo el mundo en sus estrategias de comunicación digital (**Khan**; **Yoon**; **Park**, 2014; **Panagiotopoulos**; **Bigdeli**; **Sams**, 2014; **Leone**; **Delli-Paoli**; **Senatore**, 2015; **Meijer**; **Torenvlied**, 2016; **Park** *et al.*, 2016; **Waisbord**; **Amado**, 2017; **Castillo-Esparcia**; **Castillero-Ostio**; **Castillo-Díaz**, 2020), puesto que se posiciona como una red de movilización social, con la que se consigue una gran difusión que permite llegar a la mayoría del público (**Arroyo-Almaraz**; **Calle-Mendoza**; **Van-Wyk**, 2018). Debido a su inmediatez, horizontalidad y sencillez en la publicación y difusión de contenidos, ha supuesto un cambio en la forma en la que los tres actores de la comunicación política (actores públicos, mediáticos y ciudadanos) interactúan entre sí (**Suau-Gomila** *et al.*, 2017). Este cambio se ha producido en todos los ámbitos comunicativos, incluso en los de gran impacto social como es la comunicación en situaciones de crisis y emergencia: en los orígenes de la pandemia, las redes sociales fueron el medio en el que se transmitió una información que podría haber salvado muchas vidas (**Aleixandre-Benavent**; **Castelló-Cogollos**; **Valderrama-Zurián**, 2020).

4. Objetivos

El *Real decreto 463/2020*, de 14 de marzo (*España*, 2020), por el que se declara el Estado de alarma para la gestión de la situación de crisis sanitaria ocasionada por la Covid-19, establece en su artículo 4. "Autoridad competente", que, bajo la superior dirección de la Presidencia del Gobierno, las autoridades competentes delegadas (en sus respectivas áreas de responsabilidad) al frente de la crisis sanitaria provocada por la Covid-19 durante el Estado de alarma son: el *Ministerio de Defensa*, el *Ministerio del Interior*, el *Ministerio de Transportes, Movilidad y Agenda Urbana* y el *Ministerio de Sanidad*. En este sentido, el objetivo principal de este trabajo es analizar el comportamiento comunicacional que estas instituciones, implicadas directamente en la gestión de la crisis sanitaria que nos ocupa, han llevado a cabo a través de *Twitter*, para determinar su adecuación a las recomendaciones de gestión mundial de la comunicación de crisis y de compromiso con la comunidad (CCCC) y observar si es posible inferir un modelo eficaz de comunicación institucional de crisis online específico mediante esta red social de aplicación funcional en el contexto internacional.

Para alcanzar el objetivo principal se establecen los siguientes objetivos específicos:

OE1: Determinar cuáles son los diferentes contenidos temáticos difundidos durante el estado de alarma atendiendo a los mensajes clave en situaciones de crisis.

OE2: Observar la regularidad de la información compartida atendiendo a la periodicidad de las publicaciones por día y hora.

OE3: Concretar cuáles son, en su caso, los recursos adicionales que se incluyen en cada tweet para reforzar el mensaje clave.

OE4: Identificar el volumen de interacciones de los mensajes en términos de número de comentarios, "me gusta", retweets y reproducciones de los vídeos contenidos para, posteriormente, determinar la tasa de *engagement*.

La consecución de los objetivos anteriores permitiría analizar el grado de adecuación del comportamiento comunicacional observado con los indicadores de gestión institucional de crisis relativos, principalmente, a la comunicación pública (OE1, OE2 y OE3, en relación con las especificaciones de la *OMS* en este punto acerca del tipo de mensaje, su regularidad y los recursos empleados), compromiso de la comunidad (OE1, OE2 y OE4, en relación con las especificaciones sobre compromiso, temática y regularidad) y gestión de la desinformación (OE1, OE2 y OE4, en relación con el *feedback*, la regularidad y el contenido) para así intentar conocer hasta qué punto *Twitter* se ha erigido como una de las aplicaciones clave para la CCCC, según los indicadores de la *OMS*, y si esta red puede convertirse en un medio eficaz para la comunicación institucional de crisis online desde los postulados relacionistas extrapolable a ámbitos supranacionales dadas las características universales inherentes a *Twitter*.

5. Metodología

Tomando como referencia las metodologías validadas por **Fernández-Gómez**, **Hernández-Santaolalla** y **Sanz-Marcos** (2018); **Tuñón-Navarro**, **Bouza-García** y **Carral** (2019); **Chen**, **Lerman** y **Ferrara** (2020), y **Ruiz-del-Olmo** y **Bustos-Díaz** (2020), entre otros, relativas al análisis de *Twitter* desde una perspectiva comunicacional, para alcanzar los objetivos de esta investigación se establece un diseño metodológico de corte cuantitativo. En concreto, se aplica un análisis de contenido sobre un *corpus* de 995 mensajes emitidos durante la vigencia del Estado de alarma, entre el 14 de marzo (fecha en la que entra en vigor por la publicación del *Real decreto 463/2020* en el *BOE*) y el 21 de junio (fecha en que finaliza tras las sucesivas prórrogas aprobadas en el Congreso de los Diputados), por las cuenta oficiales de *Twitter* de las instituciones oficiales al cargo de la gestión de la crisis sanitaria de la Covid-19 en España:

- @sanidadgob: 483 tweets;
- @mitmagob: 154 tweets;
- @defensagob: 263 tweets;
- @interiorgob: 95 tweets.

Para la localización de los tweets se utilizó el sistema de búsqueda avanzada de *Twitter*, analizándose finalmente todos los mensajes emitidos por las cuatro cuentas anteriores que contenían el hashtag oficial #EsteVirusLoParamosUnidos, eje de la campaña institucional puesta en marcha por el Gobierno de España.

La codificación fue realizada entre el 15 y el 30 de julio de 2020 por tres jueces, quienes tras el correspondiente período de entrenamiento alcanzaron un índice de acuerdo intercodificadores de 0,853 según el coeficiente alfa de **Krippendorff** (2004). La ficha de análisis y el libro de códigos se diseñaron a partir de los trabajos de **Capriotti**, **Zeler** y **Oliveira** (2019) y **Costa-Sánchez** y **López-García** (2020), sustentado este último en las aportaciones de **Reynolds** y **Seeger** (2005), **Vos** y **Buckner** (2015) y **Jang** y **Park** (2018). Al respecto, se contemplaron cuatro bloques principales: contenido; regularidad de la información; recursos de refuerzo del mensaje clave, e interacción y *engagement*, que proporcionarían los resultados para responder, respectivamente, a cada uno de los cuatro objetivos planteados en el epígrafe anterior.

1. Contenido: se codificó según su adscripción a los niveles:

1) advertencia y preparación (precrisis: se informa a la población del riesgo, futuros eventos adversos y recomendaciones orientadas a reducir el daño);

2) empatía y seguridad (evento inicial: se traslada empatía y seguridad, fomentándose el entendimiento general de las circunstancias de la crisis y sus consecuencias);

3) entendimiento público (mantenimiento: se propicia un entendimiento público más preciso de los riesgos, se corrigen desinformaciones y se explican las acciones de respuesta);

4) recuperación y reconstrucción (resolución: se informa y persuade sobre los esfuerzos de recuperación y reconstrucción, facilitando una discusión abierta sobre la causa, la culpabilidad, la responsabilidad, la adecuación de la respuesta y los nuevos riesgos);

5) lecciones aprendidas (evaluación: se acometen mejoras específicas en la comunicación de crisis y la capacidad de respuesta);

6) otros (mensajes no clasificables en los niveles anteriores) (**Costa-Sánchez**; **López-García**, 2020, p. 4).

2. Regularidad de la información: se identificó día y hora de publicación del tweet.

3. Recursos de refuerzo del mensaje clave: se contabilizó si el texto del tweet iba acompañado de algún otro tipo de información (imagen, vídeo, GIF, enlace a información actualizada) y si este tenía un enfoque informativo o interactivo, es decir, si se limitaba a la difusión pública de información o si estimulaba la participación a través de comentarios, acudir a otro sitio web, etc.

4. Interacción y *engagement*: se contabilizó el número de "me gusta", retweets, comentarios y respuestas a los comentarios desde las cuentas oficiales –lo cual ha sido analizado como indicador de interacción y conversación (**Criado**; **Martínez-Fuentes**; **Silván**, 2013; **Ramos-Serrano**; **Fernández-Gómez**; **Pineda-Cachero**, 2018)–, así como las reproducciones de los vídeos –cuando el mensaje lo contenía–. Esta información permitía, a su vez, obtener la tasa de *engagement*, concretada en la tasa de apoyo (total de *likes* entre el número de seguidores por cien), la tasa de viralización (total de retweets entre el número de seguidores por cien), la tasa de conversación (total de comentarios entre el número de seguidores por cien) y la tasa general de *engagement*, que es la suma de las tres anteriores (**Capriotti**; **Zeler**; **Oliveira**, 2019, p. 1102).

6. Resultados

> *Twitter* está demostrando ser una herramienta universal clave en la lucha contra la desinformación

En cuanto a la variable referida al contenido de los mensajes (tabla 2), se observa un protagonismo de la categoría empatía y seguridad (60,40%), seguida por la de entendimiento público (25,33%). Asimismo, si se atiende a cada una de las cuentas analizadas, se encuentran diferencias significativas en cuanto al contenido transmitido en función del organismo ($\chi^2_{(15)} = 489,569$; $p < 0,001$). Al respecto, se observa que, así como el *Ministerio de Transportes, Movilidad y Agenda Urbana* orienta algo más de la mitad de sus mensajes al entendimiento público, mediante la explicación de los riesgos y la información de la toma de decisiones a la población, el *Ministerio de Sanidad* utiliza prácticamente el mismo porcentaje de tweets a transmitir una sensación de seguridad e intentar reducir la agitación emocional de la ciudadanía; un contenido/cometido que ocupa también la práctica totalidad de los mensajes del *Ministerio de Defensa*, como queda ilustrado en los siguientes ejemplos.

> [Emoji de "Bustos en silueta"] #MaríaJoséRallo: "Los datos de movilidad muestran el alto grado de compromiso de la ciudadanía" para acabar con el #Covid19.
> Como dice el mensaje de @Renfe: #siemprehayluzalfinaldeltunel
> #EsteVirusLoParamosUnidos [emoji de "Bíceps flexionado"]
> (@mitmagob, 29 de marzo de 2020).

> Todo el personal de las Fuerzas Armadas, sea cual sea la misión encomendada y en el lugar en el que se nos requiera, sabe que el objetivo prioritario de la #OperaciónBalmis es y será ayudar a salvar vidas.
> #EsteVirusLoParamosUnidos
> (@defensagob, 28 de abril de 2020).

> [Emoji de "Cámara de vídeo"] Fernando Simón, director del CCAES:
> [Emoji de "Gráfico con tendencia hacia abajo"] Los datos de #Covid19 son favorables, pero al mismo tiempo nos indican que todavía se detectan casos nuevos y hay un riesgo de transmisión y por tanto no debemos bajar la guardia.
> *https://mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Actualizacion_103_Covid-19.pdf*
> #EsteVirusLoParamosUnidos
> (@sanidadgob, 12 de mayo de 2020).

Tabla 2. Contenido de los tweets por cuenta de usuario (%)

	@sanidadgob	@mitmagob	@defensagob	@interiorgob	Total
Advertencia y preparación	2,07	0,00	0,00	0,00	1,01
Empatía y seguridad	59,83	25,97	94,30	25,26	60,40
Entendimiento público	27,33	59,09	2,28	24,21	25,33
Recuperación y reconstrucción	3,31	0,65	0,00	3,16	2,01
Lecciones aprendidas	5,80	9,09	0,00	3,16	4,52
Otros	1,66	5,19	3,42	44,21	6,73
Total	483	154	263	95	995

En cuanto a la regularidad de la información, en el gráfico 1 puede observarse la distribución de los mensajes emitidos por cada una de las cuentas y el conjunto de estas a lo largo del continuo temporal, y en la tabla 3 los estadísticos descriptivos de los mensajes por usuario y día. Al respecto, se observa cómo la distribución de tweets por día se mantuvo bastante estable entre los organismos, notándose una bajada generalizada de la actividad a partir del 23 de mayo, coincidiendo con el inminente inicio (el 25 de mayo) de la fase 2 de la desescalada y la progresiva mayor flexibilización de las restricciones derivadas de la emergencia sanitaria provocada por la Covid-19. Del mismo modo, se observan algunos picos de actividad que, si bien en ocasiones son bastante generalizados, como el 13 de abril o el 3 y el 4 de mayo, esta última, en la que comenzó la fase cero, en otros se limitan a cuentas determinadas. De esta forma, así como los días de mayor actividad del *Ministerio de Transportes, Movilidad y Agenda Urbana* y del *Ministerio de Sanidad* fueron precisamente los dos últimos señalados, el día de mayor actividad de la cuenta del *Ministerio del Interior* fue el 24 de marzo, mientras que el del *Ministerio de Defensa* fue el 26 de abril. En cuanto a la hora de publicación de los tweets, el 88,74% de los mismos se emitieron entre las 10:00 y las 20:59 (tabla 4). A continuación, se recogen, a modo de ejemplo, algunos tweets de los días indicados:

> Convierte al emisor institucional en una fuente fiable de información generando elevados niveles de confianza en los públicos

> Y nuestro reconocimiento hoy va a todas las niñas y niños que se están portando como unos campeones en estos días difíciles [emojis de “Bebé”, “Chica” y “Chico”]
> Y también va a las madres y a los padres, que están haciendo un esfuerzo diario titánico [emojis de “Familia (mujer, niña, niño)” y “Familia (hombre, niña, niño)”]
> ¡GRACIAS!
> #EsteVirusLoParamosUnidos
> (@interiorgob 24 de marzo de 2020).

> #OperaciónBalmis
> En esta batalla contra el #Covid19, los hombres y mujeres de nuestras Fuerzas Armadas están muy cerca de los más vulnerables; demostrando, una vez más, su vocación de servicio y su gran calidad humana.
> #EsteVirusLoParamosUnidos
> (@defensagob, 26 de abril de 2020).

> [Emojis de “Megáfono” y “Marcadores”] A partir de mañana será obligatorio el uso de mascarillas en el transporte público.
> El @boegob publica hoy una #OM donde se fijan los requisitos para garantizar una #movilidad segura conforme al Plan de nueva normalidad.
> https://bit.ly/2WfaOgI
> #EsteVirusLoParamosUnidos
> (@mitmagob, 3 de mayo de 2020).

> [Emoji de “Calendario”] ¿Qué implica la #FASE0?
> [Emoji de “Poste de barbero”] Se reactiva la actividad comercial y determinados servicios profesionales, siempre cumpliendo unos requisitos de aforo, distancia, las medidas de higiene y aforo.
> Más información en @boegob ↓
> https://boe.es/boe/dias/2020/05/03/pdfs/BOE-A-2020-4793.pdf
> #EsteVirusLoParamosUnidos
> (@sanidadgob, 4 de mayo de 2020).

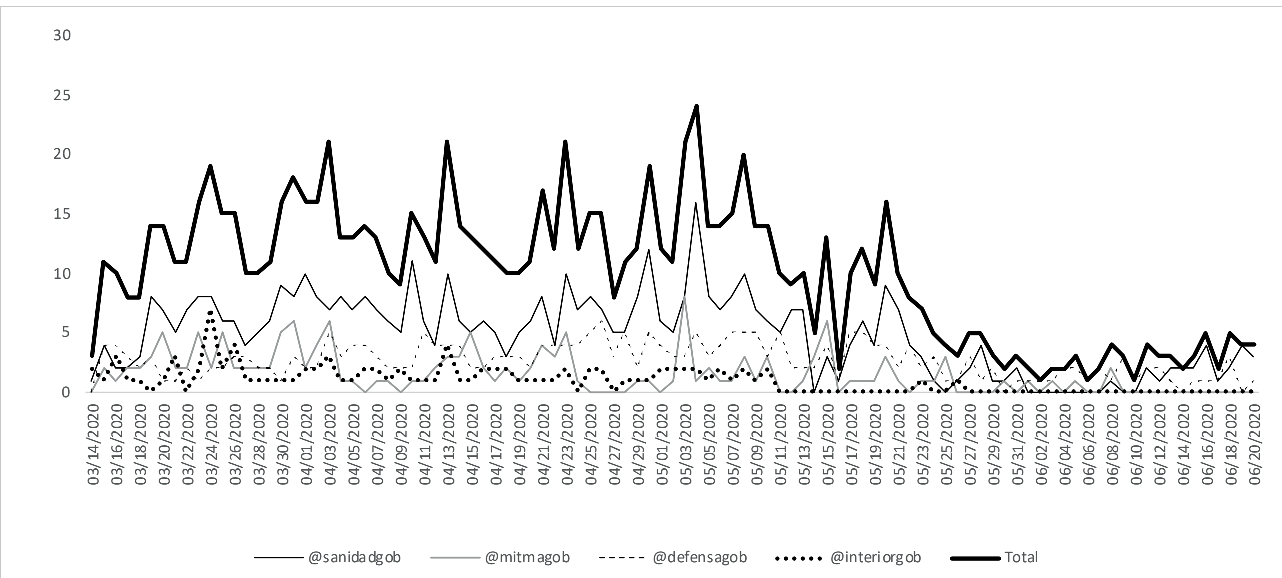


Gráfico 1. Distribución de tweets analizados según la fecha de emisión

Tabla 3. Estadísticos descriptivos de tweets por día

	@sanidadgob	@mitmagob	@defensagob	@interiorgob	Total
Media	4,88	1,55	2,66	0,96	10,04
Desviación típica	3,25	1,72	1,44	1,15	5,64
Máximo de mensajes/día	16	8	6	7	24
Mínimo de mensajes/día	0	0	0	0	1
Total	483	154	263	95	995

Tabla 4. Distribución de tweets por horas y cuenta de usuario (%)

	@sanidadgob	@mitmagob	@defensagob	@interiorgob	Total
00:00-00:59	0,00	0,00	0,00	0,00	0,00
01:00-01:59	0,00	0,00	0,00	0,00	0,00
02:00-02:59	0,00	0,00	0,00	0,00	0,00
03:00-03:59	0,00	0,00	0,00	0,00	0,00
04:00-04:59	0,00	0,00	0,00	0,00	0,00
05:00-05:59	0,00	0,00	0,00	0,00	0,00
06:00-06:59	0,41	0,00	0,00	0,00	0,20
07:00-07:59	0,21	0,00	0,00	0,00	0,10
08:00-08:59	1,24	0,00	0,00	0,00	0,60
09:00-09:59	5,59	0,00	4,18	7,37	4,52
10:00-10:59	5,59	3,25	10,65	4,21	6,43
11:00-11:59	12,84	11,69	11,79	4,21	11,56
12:00-12:59	6,63	12,99	11,41	3,16	8,54
13:00-13:59	9,52	7,79	10,65	15,79	10,15
14:00-14:59	8,07	11,69	7,60	24,21	10,05
15:00-15:59	6,42	5,19	1,90	6,32	5,03
16:00-16:59	6,21	1,95	4,18	7,37	5,13
17:00-17:59	7,66	7,14	4,56	4,21	6,43
18:00-18:59	5,59	12,99	6,84	4,21	6,93
19:00-19:59	9,52	8,44	6,84	6,32	8,34
20:00-20:59	8,90	9,09	14,45	6,32	10,15
21:00-21:59	4,14	6,49	3,42	4,21	4,32
22:00-22:59	1,45	1,30	1,52	2,11	1,51
23:00-23:59	0,00	0,00	0,00	0,00	0,00
Total	483	154	263	95	995

Con respecto al formato de los mensajes, como puede observarse en la tabla 5, existe una disparidad en función de la cuenta analizada, aunque en general las opciones de vídeo o imagen suelen ser las mayoritarias. Asimismo, en cuanto al enfoque, si bien priman los mensajes de carácter informativo –ilustrados en los primeros dos tweets apuntados a continuación–, también pueden encontrarse algunos mensajes de índole interactiva, especialmente en el caso del *Ministerio de Transportes, Movilidad y Agenda Urbana* –como ejemplifica el tercero de los tweets siguientes–, y en menor medida en el perfil del *Ministerio de Sanidad*. Al respecto, destaca la cuenta del *Ministerio de Defensa*, donde todos los mensajes buscan la mera transmisión de información. En cualquier caso, se observan diferencias significativas según el estadístico chi-cuadrado con respecto al formato ($\chi^2_{(12)}$ = 606,066; p < 0,001) y el enfoque ($\chi^2_{(3)}$ = 36,084; p < 0,001) en función de la cuenta analizada.

> Desde la puesta en marcha de la #OperaciónBalmis, el @EjercitoAire ha realizado 34 aerotransportes, 14 de ellos vuelos internacionales, con material sanitario y equipamiento de protección.
> #EsteVirusLoParamosUnidos
> (@defensagob, 26 de abril de 2020).

> Publicados los datos actualizados de #Covid2019
> Consulta aquí la situación en España https://covid19.isciii.es
> #EsteVirusLoParamosUnidos
> (@sanidadgob, 26 de marzo de 2020).

[…] Ante el brote #coronavirus, es importante disponer de información contrastada y confirmada.
[…]Suscríbete a nuestro canal oficial de #Telegram para estar al día de todas las actualizaciones.
[…] Súmate aquí: *https://t.me/mitmagob*
#EsteVirusLoParamosUnidos
#QuédateEnCasa […]
(@mitmagob, 20 de marzo de 2020).

Tabla 5. Formato y enfoque de los tweets por cuenta de usuario (%)

	@sanidadgob	@mitmagob	@defensagob	@interiorgob	Total
Formato					
Imagen	6,63	18,83	84,03	14,74	29,75
Vídeo	45,34	31,17	12,93	21,05	32,26
GIF	4,97	11,04	0,76	0,00	4,32
Otros	20,29	29,22	1,52	17,89	16,48
Link a información	22,77	9,74	0,76	46,32	17,19
Enfoque					
Informativo	95,65	89,61	100,00	98,95	96,18
Interactivo	4,35	10,39	0,00	1,05	3,82
Total	483	154	263	95	995

Por último, con respecto a las interacciones del resto de los usuarios con los mensajes emitidos por los organismos oficiales, en la tabla 6 se observan, en general, buenos niveles si se atiende a la media de los valores, destacando a la baja la cuenta del *Ministerio de Transportes, Movilidad y Agenda Urbana*, que, a su vez, es la que cuenta con un menor número de seguidores. Sin embargo, los altos valores de las desviaciones típicas indican que existe una gran variación en cuanto a los "me gusta", retweets y comentarios alcanzados por cada mensaje. Así, por ejemplo, el 72,9% de los mensajes emitidos por la cuenta del *Ministerio de Sanidad* cuenta con menos de 400 *likes*, mientras que, por el margen superior, sólo seis tweets alcanzan la cifra de 2.000, habiendo un salto de más de 10.000 "me gusta" entre el primero y el segundo.

Por otro lado, resulta interesante el bajo índice de respuestas que las cuentas oficiales ofrecen a los comentarios de los usuarios, lo que negaría la utilidad conversacional de *Twitter*, al menos entre institución y usuario.

Finalmente, atendiendo a las tasas de *engagement*, la cuenta que obtiene una tasa general más elevada es la del *Ministerio de Sanidad*, seguida por la del *Ministerio de Defensa*. Estas dos son, además, las que cuentan con una mayor tasa de

Tabla 6. Total de interacciones y tasa de *engagement*

		@sanidadgob	@mitmagob	@defensagob	@interiorgob	Total
Seguidores		553.541	105.724	397.748	724.645	
Tweets		483	154	263	95	995
Me gusta	M	410,44	36,3	537,67	252,57	371,09
	SD	842,864	45,839	810,64	488,141	753,232
	Total	198.242	5.590	141.407	23.994	369.233
Retweets	M	310,46	29,91	151,50	137,42	208,50
	SD	481,501	43,834	341,585	286,749	403,218
	Total	149953	4606	39844	13055	207458
Comentarios	M	69,46	5,08	16,30	47,61	43,36
	SD	113,83	9,819	38,953	63,859	88,53
	Total	33551	783	4286	4523	43143
Respuestas a comentarios	M	0,13	0,28	0,03	0,04	0,12
	SD	0,672	0,867	0,268	0,289	0,607
	Total	64	43	7	4	118
Reproducción de vídeo*	M	89,06	3,53	42,04	27,07	67,36
	SD	618,10	5,82	71,82	25,51	511,44
TdA		35,81	5,29	35,55	3,31	
TdV		27,09	4,36	10,02	1,80	
TdC		6,06	0,74	1,08	0,62	
TEG		68,96	10,38	46,65	5,74	

* Para calcular los estadísticos descriptivos de las reproducciones de vídeo sólo se tuvieron en cuenta los mensajes que contenían alguno.

apoyo y de viralización, siendo esta última bastante superior en el caso de la cuenta @sanidadgob, lo que significa que los tweets han sido compartidos un mayor número de veces por cada cien seguidores. También el *Ministerio de Sanidad* es el que cuenta con una mayor tasa de conversación, aunque esta sigue siendo muy reducida. Al cruzar dicha tasa de *engagement* con el resto de variables analizadas, se observa que sólo existen diferencias estadísticamente significativas entre esta y el formato ($\chi^2_{(12)}$ = 23,031; p < 0,03), pero no así entre la tasa de *engagement* y el contenido o el enfoque. En este sentido, se aprecia que son aquellos mensajes que contaban con apoyo audiovisual, especialmente vídeos, los que generaban un mayor *engagement*.

7. Discusión y conclusiones

Twitter se revela *a priori* como un medio clave para la transmisión regular, constante y pertinente de la información bajo el paradigma de la transparencia de las organizaciones: un vehículo ideal para construir y mantener relaciones interactivas intensivas con los públicos (**Grunig**, 2009) y generar así una confianza en la opinión pública (**Hucker**, 2020) que se manifiesta en el número de interacciones y en el *engagement* (**Lazarus**; **Thornton**, 2020). Es un sistema eficaz de comunicación institucional de crisis que parte de su capacidad (si es adecuadamente gestionada) de posicionar a las instituciones como fuentes informativas fiables. Es uno de los antídotos clave para luchar contra la infodemia y es fruto, fundamentalmente, de la gestión de los contenidos que se transmiten, la regularidad de la información, los recursos empleados y la bidireccionalidad implícita que se mantiene con los públicos.

Se evidencia una concentración de mensajes en torno a las medidas adoptadas frente a la crisis, la desescalada y las recomendaciones sociosanitarias. *Twitter* permite a las instituciones la emisión de contenidos en tiempo real, muy eficaces en situaciones de crisis severas como la que nos ocupa.

Los resultados obtenidos en este estudio se alinean con los trabajos previos de **Reynolds** y **Seeger** (2005), **Vos** y **Buckner** (2015) y **Jang** y **Park** (2018) sobre los tipos de mensajes asociados a las cinco etapas en la gestión de la comunicación en situaciones de crisis (**Costa-Sánchez**; **López-García**, 2020, p. 4).

La periodicidad de la información compartida por los citados ministerios españoles coincide tanto con las recomendaciones de **Jordan** (2017), que establece que lo ideal es publicar entre uno y dos posts al día, como con las franjas horarias más utilizadas para conectarse a las redes sociales según el *Estudio Anual de Redes Sociales de 2019* (*IAB Spain*, 2019), que se concentran en torno a dos sesiones principales de mañana y tarde. Estos datos confirmarían un goteo informativo que se adapta a las necesidades informativas detectadas en la población y a sus hábitos de consumo informativo. Facilitar los mensajes cuando más pueden interesar favorece una comunicación efectiva con los públicos. Se optimiza así una asimilación de los mensajes institucionales que coadyuva, consecuentemente, a contrarrestar tímidamente la infodemia, pues si bien el volumen de información se sigue incrementando, se intenta priorizar los mensajes procedentes de fuentes oficiales. En otras palabras, si bien no habría una mejora en cuanto a cantidad –algo que sólo se conseguiría reduciendo el número de mensajes de las distintas fuentes–, sí que se atisba una intención de optimización de la calidad de la información.

Se evidencia que los recursos audiovisuales son los más utilizados para ilustrar el mensaje clave a transmitir, favoreciendo, a su vez, la generación de *engagement*. De hecho, al relacionar el resto de variables estudiadas y la tasa de *engagement*, sólo se obtuvieron relaciones estadísticamente significativas en el caso de la variable formato, resolviéndose cómo aquellos mensajes que utilizaban contenido audiovisual, especialmente vídeos, generaban un mayor compromiso por parte de los usuarios, lo cual está en consonancia con los hallazgos de **Capriotti**, **Zeler** y **Oliveira** (2019, p. 1098).

El *engagement* está determinado principalmente por el alto número de me gusta, retweets y comentarios obtenidos. Sin embargo, la interactividad real, que implicaría la respuesta de la cuenta oficial a los comentarios de los usuarios es muy reducida, lo que pondría en entredicho la capacidad conversacional de la red social (**Ramos-Serrano**; **Fernández-Gómez**; **Pineda-Cachero**, 2018). En cualquier caso, destacan los niveles de compromiso en la cuenta del *Ministerio de Sanidad* que, al fin y al cabo, es la que se podía entender como la más idónea para informar en esta situación de crisis sanitaria que estamos analizando.

> *Twitter* permite aplicar un modelo dialógico de comunicación institucional online

Como conclusión final, se puede afirmar que el comportamiento comunicacional en *Twitter* de los ministerios al frente de la crisis sanitaria derivada de la Covid-19 se adscriben firmemente a cinco de las recomendaciones en materia de comunicación pública emitidas por la *World Health Organization* (2020) relativa a las etapas para la gestión de la CCCC. En este sentido, si bien se observa una infrautilización para la gestión del compromiso con la comunidad, el uso de *Twitter* por parte de los ministerios analizados permitiría abordar la incertidumbre y gestionar la desinformación entre la población. De este modo, el comportamiento comunicacional del Gobierno de España, en el período analizado, se focaliza en el posicionamiento de las autoridades delegadas al frente de la crisis sanitaria como una fuente de información pública constante y fiable, implicando así

> "una clara estrategia de relaciones públicas, trabajando la imagen favorable de modo indirecto o implícito, a través de la información y la transparencia en la gestión, entendida esta como la rendición pública de cuentas" (**Castillo-Esparcia**; **Fernández-Souto**; **Puentes-Rivera**, 2020, p. 18).

8. Notas

1. Del original inglés RCCE, acrónimo de *risk communication and community engagement*.

9. Referencias

Akar, Adam; **Muraki, Yuya** (2011). "*Twitter* for crisis communication: lessons learned from Japan's tsunami disaster". *International journal of web based communities*, v. 7, n. 3, pp. 392-402.
https://doi.org/10.1504/IJWBC.2011.041206

Aleixandre-Benavent, Rafael; **Castelló-Cogollos, Lourdes**; **Valderrama-Zurián, Juan-Carlos** (2020). "Información y comunicación durante los primeros meses de Covid-19. Infodemia, desinformación y papel de los profesionales de la información". *El profesional de la información*, v. 29, n. 4, e290408.
https://doi.org/10.3145/epi.2020.jul.08

Arroyo-Almaraz, Isidoro; **Calle-Mendoza, Samuel**; **Van-Wyk, Cliff** (2018). "La eficacia en la comunicación de las ONGD. El uso de Facebook en campañas de emergencia". *Revista latina de comunicación social*, n. 73, pp. 765-789.
https://doi.org/10.4185/RLCS-2018-1281

Burton, Scott H.; **Tanner, Kesler W.**; **Giraud-Carrier, Christophe G.**; **West, Joshua H.**; **Barnes, Michael D.** (2012). "'Right time, right place'. Health communication on Twitter: value and accuracy of location information". *Journal of medical internet research*, v. 14, n. 6, e156.
https://doi.org/10.2196/jmir.2121

Caldevilla-Domínguez, David; **Rodríguez-Terceño, José**; **Barrientos-Báez, Almudena** (2019). "El malestar social a través de las nuevas tecnologías: *Twitter* como herramienta política". *Revista latina de comunicación social*, n. 74, pp. 1264-1290.
https://doi.org/10.4185/RLCS-2019-1383

Capriotti, Paul; **Zeler, Ileana**; **Oliveira, Andrea** (2019). "Comunicación dialógica 2.0 en *Facebook*. Análisis de la interacción en las organizaciones de América Latina". *Revista latina de comunicación social*, n. 74, pp. 1094-1113.
https://doi.org/10.4185/RLCS-2019-1373

Casero-Ripollés, Andreu (2020). "Impact of Covid-19 on the media system. Communicative and democratic consequences of news consumption during the outbreak". *El profesional de la información*, v. 29, n. 2, e290223.
https://doi.org/10.3145/epi.2020.mar.23

Castillo-Esparcia, Antonio; **Castillero-Ostio, Elisabeth**; **Castillo-Díaz, Ana** (2020). "Los think tanks en España. Análisis de sus estrategias de comunicación digitales". *Revista latina de comunicación social*, n. 77, pp. 253-273.
https://www.doi.org/10.4185/RLCS-2020-1457

Castillo-Esparcia, Antonio; **Fernández-Souto, Ana-Belén**; **Puentes-Rivera, Iván** (2020). "Comunicación política y Covid-19. Estrategias del *Gobierno de España*". *El profesional de la información*, v. 29, n. 4, e290419.
https://doi.org/10.3145/epi.2020.jul.19

Chan, Kit-Lam; **Ho, Soo-Yong**; **Lam, Thai-Hing** (2013). "Infodemiology of alcohol use in Hong Kong mentioned on blogs: infoveillance study". *Journal of medical internet research*, v. 15, n. 9, e192.
https://doi.org/10.2196/jmir.2180

Chatfield, Akemi-Takeoka; **Scholl, Hans-Jochen**; **Brajawidagda, Uuf** (2013). "Tsunami early warnings via *Twitter* in government: Net-savvy citizens' co-production of time-critical public information services". *Government information quarterly*, v. 30, n. 4, pp. 377-386.
https://doi.org/10.1016/j.giq.2013.05.021

Chen, Emily; **Lerman, Kristina**; **Ferrara, Emilio** (2020). "Tracking social media discourse about the Covid-19 pandemic: development of a public coronavirus *Twitter* data set. *JMIR public health and surveillance*, v. 6, n. 2, e19273.
https://doi.org/10.2196/19273

Chew, Cynthia; **Eysenbach, Gunther** (2010). "Pandemics in the age of *Twitter*: content analysis of tweets during the 2009 H1N1 outbreak". *PLoS one*, v. 5, n. 11, e14118.
https://doi.org/10.1371/journal.pone.0014118

Costa-Sánchez, Carmen; **López-García, Xosé** (2020). "Comunicación y crisis del coronavirus en España. Primeras lecciones". *Profesional de la información*, v. 29, n. 3, e290304.
https://doi.org/10.3145/epi.2020.may.04

Cousins, Henry C.; **Cousins, Clara C.**; **Harris, Alon**; **Pasquale, Louis R.** (2020). "Regional infoveillance of Covid-19 case rates: analysis of search-engine query patterns". *Journal of medical internet research*, v. 22, n. 7, e19483.
https://doi.org/10.2196/19483

Criado, Juan-Ignacio; **Martínez-Fuentes, Guadalupe**; **Silván, Aitor** (2013). "*Twitter* en campaña: las elecciones municipales españolas de 2011". *Revista de investigaciones políticas y sociológicas*, v. 12, n. 1, pp. 93-113.
https://revistas.usc.gal/index.php/rips/article/view/1307

Edo-Osagie, Oduwa; **De-La-Iglesia, Beatriz**; **Lake, Iain**; **Edeghere, Obaghe** (2020). "A scoping review of the use of *Twitter* for public health research". *Computers in biology and medicine*, n. 122, e103770.
https://doi.org/10.1016/j.compbiomed.2020.103770

España (2020). "Real decreto 463/2020, de 14 de marzo, por el que se declara el estado de alarma para la gestión de la situación de crisis sanitaria ocasionada por el Covid-19". *BOE*, n. 67, 14 marzo.
https://www.boe.es/buscar/doc.php?id=BOE-A-2020-3692

Evans, Angelica; **Twomey, Jane**; **Talan, Scott** (2011). "Twitter as a public relations tool". *Public relations journal*, v. 5, n. 1, pp. 15-31.
https://www.researchgate.net/publication/265278938_Twitter_as_a_Public_Relations_Tool

Eysenbach, Gunther (2002). "Infodemiology: the epidemiology of (mis)information". *The American journal of medicine*, v. 113, n. 9, pp. 763-765.
https://doi.org/10.1016/S0002-9343(02)01473-0

Eysenbach, Gunther (2006). "Infodemiology: tracking flu-related searches on the web for syndromic surveillance". In: *AMIA Annual symposium procedures*, pp. 244-248.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1839505

Eysenbach, Gunther (2009). "Infodemiology and infoveillance: framework for an emerging set of public health informatics methods to analyze search, communication and publication behavior on the internet". *Journal of medical internet research*, v. 11, n. 1, e11.
https://doi.org/10.2196/jmir.1157

Eysenbach, Gunther (2020). "How to fight an infodemic: the four pillars of infodemic management". *Journal of medical internet research*, v. 22, n. 6, e21820.
https://doi.org/10.2196/21820

Fernández-Gómez, Jorge-David; **Hernández-Santaolalla, Víctor**; **Sanz-Marcos, Paloma** (2018). "Influencers, marca personal e ideología política en *Twitter*". *Cuadernos.info*, n. 42, pp. 19-37.
https://scielo.conicyt.cl/scielo.php?script=sci_arttext&pid=S0719-367X2018000100019

Gong, Xi; **Lane, Maria D.** (2020). "Institutional Twitter usage among U.S. geography departments". *The professional geographer*, v. 72, n. 2, pp. 219-237.
https://doi.org/10.1080/00330124.2019.1653770

Grunig, James E. (2009). "Paradigms of global public relations in an age of digitalisation". *PRism*, n. 6, pp. 1-19.
https://www.prismjournal.org/uploads/1/2/5/6/125661607/v6-no2-a1.pdf

Guesalaga, Rodrigo (2016). "The use of social media in sales: individual and organizational antecedents, and the role of customer engagement in social media". *Industrial marketing management*, v. 54, pp. 71-79.
https://doi.org/10.1016/j.indmarman.2015.12.002

Hernández-García, Ignacio; **Giménez-Júlvez, Teresa** (2020). "Assessment of health information about Covid-19 prevention on the internet: infodemiological study". *JMIR public health and surveillance*, v. 6, n. 2, e18717.
https://doi.org/10.2196/18717

Higgins, Thomas S.; **Wu, Arthur W.**; **Sharma, Dhruv**; **Illing, Elisa A.**; **Rubel, Kolin**; **Ting, Jonathan Y.** (2020). "Correlations of online search engine trends with Coronavirus disease (Covid-19) incidence: infodemiology study". *JMIR public health and surveillance*, v. 6, n. 2, e19702.
https://doi.org/10.2196/19702

Hucker, Daniel (2020). *Public opinion and twentieth-century diplomacy: a global perspective.* London: Bloomsbury academic. ISBN: 978 1 472527165

IAB Spain (2019). *Estudio anual de redes sociales 2019*. *IAB Spain*.
https://iabspain.es/wp-content/uploads/2019/06/estudio-anual-redes-sociales-iab-spain-2019_vreducida.pdf

Jang, Kyungeun; **Park, Namkee** (2018). "The effects of repetitive information communication through multiple channels on prevention behavior during the 2015 MERS outbreak in South Korea". *Journal of health communication*, v. 23, n. 7, pp. 670-678.
https://doi.org/10.1080/10810730.2018.1501440

Jayarama, Dureen; **Manraib, Ajay K.**; **Manraib, Lalita A.** (2015). "Effective use of marketing technology in Eastern Europe: web analytics, social media, customer analytics, digital campaigns and mobile applications". *Journal of economics, finance and administrative science*, v. 20, n. 39, pp. 118-132.
https://doi.org/10.1016/j.jefas.2015.07.001

Jordan, Katy (2017). "Examining the UK higher education sector through the network of institutional accounts on Twitter". *First Monday*, v. 22, n. 5, pp. 1-28.
http://oro.open.ac.uk/49233/3/FirstMonday_accepted.pdf

Keinänen, Hanna; **Kuivalainen, Olli** (2015). "Antecedents of social media B2B use in industrial marketing context: Customers' view". *Journal of business & industrial marketing*, v. 30, n. 6, pp. 711-722.
https://doi.org/10.1108/JBIM-04-2013-0095

Khan, Gohar-Feroz; **Yoon, Ho-Young**; **Park, Han-Woo** (2014). "Social media communication strategies of government agencies: *Twitter* use in Korea and the USA". *Asian journal of communication*, v. 24, n. 1, p. 60-78.
https://doi.org/10.1080/01292986.2013.851723

Killian, Ginger; **McManus, Kristy** (2015). "A marketing communications approach for the digital era: managerial guidelines for social media integration". *Business horizons*, v. 58, n. 5, pp. 539-549.
https://doi.org/10.1016/j.bushor.2015.05.006

Kouzy, Ramez; **Jaoude, Joseph-Abi**; **Kraitem, Afif**; **El-Alam, Moli B.**; **Karam, Basil**; **Zarka, Jabra**; **Traboulsi, Cindy**; **Akl, Elie W.**; **Baddour, Khalil** (2020). "Coronavirus goes viral: quantifying the Covid-19 misinformation epidemic on *Twitter*". *Cureus*, v. 12, n. 3, e7255.
https://doi.org/10.7759/cureus.7255

Krippendorff, Klaus (2004). "Reliability in content analysis. Some common misconceptions and recommendations". *Human communication research*, v. 30, n. 3, pp. 411-433.
https://doi.org/10.1111/j.1468-2958.2004.tb00738.x

Lachlan, Kenneth A.; **Xu, Zhan**; **Hutter, Emily E.**; **Adam, Rainear**; **Spence, Patric R.** (2019). "A little goes a long way: serial transmission of Twitter content associated with hurricane Irma and implications for crisis communication". *Journal of strategic innovation and sustainability*, v. 14, n. 1, pp. 16-26.
https://cutt.ly/9kvcxcB
https://doi.org/10.33423/jsis.v14i1.984

Lázaro-Rodríguez, Pedro; **Herrera-Viedma, Enrique** (2020). "Noticias sobre Covid-19 y 2019-nCoV en medios de comunicación de España: el papel de los medios digitales en tiempos de confinamiento". *Profesional de la información*, v. 29, n. 3, e290302.
https://doi.org/10.3145/epi.2020.may.02

Lazarus, Jeffrey; **Thornton, Judd R.** (2020). "Bully pulpit? Twitter users' engagement with President Trump's tweets". *Social science computer review*, v. 31, n. 5, pp. 625-643.
https://doi.org/10.1177/0894439320946578

Ledingham, John A. (2001). "Government-community relationships: extending the relational theory of public relations". *Public relations review*, v. 27, n. 3, pp. 285-295.
https://doi.org/10.1016/S0363-8111(01)00087-X

Ledingham, John A. (2003). "Explicating relationship management as a general theory of public relations". *Journal of public relations research*, v. 15, n. 2, pp. 181-198.
https://doi.org/10.1207/S1532754XJPRR1502_4

Ledingham, John A.; **Bruning, Stephen D.** (1998). "Relationship management in public relations: dimensions of an organization-public relationship". *Public relations review*, v. 24, n. 1, pp. 55-65.
https://doi.org/10.1016/S0363-8111(98)80020-9

Ledingham, John A.; **Bruning, Stephen D.** (1999). "Relationships between organizations and publics: development of a multi-dimensional organization-public relationship scale". *Public relations review*, v. 25, n. 2, pp. 157-170.
https://doi.org/10.1016/S0363-8111(99)80160-X

Leone, Stefania; **Delli-Paoli, Angela**; **Senatore, Daniela** (2015). "Social media communication in central governments: the case of Twitter activity of Italian ministries". *Journal of communications research*, v. 7, n. 4, 413-429.
https://cutt.ly/okvcFM9

Liao, Qiuyan; **Yuan, Jiehu**; **Dong, Meihong**; **Yang, Lin**; **Fielding, Richard**; **Lam, Wendy-Wing-Tak** (2020). "Public engagement and government responsiveness in the communications about Covid-19 during the early epidemic stage in China: infodemiology study on social media data". *Journal of medical internet research*, v. 22, n. 5, e18796.
https://doi.org/10.2196/18796

Liu, Sam; **Chen, Brian**; **Kuo, Alex** (2019). "Monitoring physical activity levels using *Twitter* data: infodemiology study". *Journal of medical internet research*, v. 21, n. 6, e12394.
https://doi.org/10.2196/12394

Mavragani, Amaryllis (2020a). "Tracking Covid-19 in Europe: infodemiology approach". *JMIR Public health and surveillance*, v. 6, n. 2, e18941.
https://doi.org/10.2196/18941

Mavragani, Amaryllis (2020b). "Infodemiology and infoveillance: scoping review". *Journal of medical internet research*, v. 22, n. 4, e16206.
https://doi.org/10.2196/16206

Mavragani, Amaryllis; **Ochoa, Gabriela** (2019). "Google trends in infodemiology and infoveillance: methodology framework. *JMIR Public health and surveillance*, v. 5, n. 2, e13439.
https://doi.org/10.2196/13439

Mahoney, L. Meghan; **Tang, Tang**; **Ji, Kai**; **Ulrich-Schad, Jessica** (2015). "The digital distribution of public health news surrounding the human papillomavirus vaccination: a longitudinal infodemiology study. *JMIR Public health and surveillance*, v. 1, n. 1, e2.
https://publichealth.jmir.org/2015/1/e2/?utm_source=TrendMD&utm_medium=cpc&utm_campaign=JMIR_TrendMD_0

McCann, Margaret; **Barlow, Alexis** (2015), "Use and measurement of social media for SMEs". *Journal of small business and enterprise development*, v. 22, n. 2, pp. 273-287.
https://doi.org/10.1108/JSBED-08-2012-0096

McGravey, Kevin (2020). "Digital public forums: Power and representation in the internet's public squares". *New political science*, v. 42, n. 3, pp. 253-271.
https://doi.org/10.1080/07393148.2020.1807274

Meijer, Albert-Jacob; **Torenvlied, René** (2016). "Social media and the new organization of government communications: an empirical analysis of *Twitter* usage by the Dutch police". *The American review of public administration*, v. 46, n. 2, pp. 143-161.
https://doi.org/10.1177/0275074014551381

Panagiotopoulos, Panagiotis; **Bigdeli, Alinaghi-Ziaee**; **Sams, Steven** (2014). "Citizen-government collaboration on social media: the case of *Twitter* in the 2011 riots in England". *Government information quarterly*, v. 31, n. 3, pp. 349-357.
https://doi.org/10.1016/j.giq.2013.10.014

Park, Han-Woo; **Park, Sejung**; **Chong, Miyoung** (2020). "Conversations and medical news frames on Twitter: infodemiological study on Covid-19 in South Korea". *Journal of medical internet research*, v. 22, n. 5, e18897.
https://doi.org/10.2196/18897

Park, Min-Jae; **Kang, Dongsuk**; **Rho, Jae-Jeung**; **Lee, Duk-Hee** (2016). "Policy role of social media in developing public trust: *Twitter* communication with government leaders. *Public management review*, v. 18, n. 9, pp. 1265-1288.
https://doi.org/10.1080/14719037.2015.1066418

Pătruț, Monica (2015). "Candidates in the presidential elections in Romania (2014): the use of social media in political marketing". *Studies and scientific researches. Economics edition*, n. 21, pp. 127-135.
https://doi.org/10.29358/sceco.v0i21.309

Pérez-Gabaldón, Marta; **Nicasio-Varea, Blanca** (2019). "Comunicación parlamentaria 2.0: el debate de la moción de censura en *Twitter*". *Miguel Hernández communication journal*, v. 10, n. 1, pp. 147-164.
https://dialnet.unirioja.es/servlet/articulo?codigo=6784667

Pourebrahim, Nastaran; **Sultana, Selima**; **Edwards, John**; **Gochanour, Amanda**; **Mohantyc, Somya** (2019). "Understanding communication dynamics on *Twitter* during natural disasters: a case study of Hurricane Sandy". *International journal of disaster risk*, v. 37, pp. 101-176.
https://doi.org/10.1016/j.ijdrr.2019.101176

Radin, Massimo; **Sciascia, Savino** (2017). "Infodemiology of systemic lupus erythematous using Google Trends". *Lupus*, v. 26, n. 8, pp. 886-889.
https://doi.org/10.1177/0961203317691372

Ramos-Serrano, Marina; **Fernández-Gómez, Jorge-David**; **Pineda-Cachero, Antonio** (2018). "'Follow the closing of the campaign on streaming': the use of Twitter by Spanish political parties during the 2014 European elections". *New media & society*, v. 20, n. 1, pp. 122-140.
https://doi.org/10.1177/1461444816660730

Reynolds, Barbara; **Seeger, Matthew W.** (2005). "Crisis and emergency risk communication as an integrative model". *Journal of health communication*, v. 10, n. 1, pp. 43-55.
https://doi.org/10.1080/10810730590904571

Rodríguez-Fidalgo, María-Isabel; **Ruiz-Paz, Yanira**; **Paíno-Ambrosio, Adriana** (2019). "#EleccionesMéxico2018: Post election analysis of news media's tweets and citizens' feedback". *Communication & society*, v. 32, n. 4, pp. 193-206.
https://doi.org/10.15581/003.32.4.193-205

Rosenberg, Hans; **Syed, Shahbaz**; **Rezaie, Salim** (2020). "The Twitter pandemic: the critical role of Twitter in the dissemination of medical information and misinformation during the Covid-19 pandemic". *Canadian journal of emergency medicine*, v. 22, n. 4, pp. 418-421.
https://doi.org/10.1017/cem.2020.361

Rovetta, Alessandro; **Bhagavathula, Akshaya-Srikanth** (2020). "Global infodemiology of Covid-19: focus on *Google Web* searches and *Instagram* hashtags". *Journal of medical internet research*, v. 22, n. 8, e20673.
https://doi.org/10.2196/20673

Ruiz-del-Olmo, Francisco-Javier; **Bustos-Díaz, Javier** (2020). "Las imágenes publicadas en *Twitter* como forma de comunicación política. El caso de las elecciones generales del año 2016 en España". *Revista latina de comunicación social*, n. 75, pp. 313-326.
https://www.doi.org/10.4185/RLCS-2020-1428

Sáez-Martín, Alejandro; **Haro-de-Rosario, Arturo**; **Caba-Pérez, María-del-Carmen** (2015). "Using *Twitter* for dialogic communication: local government strategies in the European Union". *Local government studies*, v. 41, n. 3, pp. 421-444.
https://doi.org/10.1080/03003930.2014.991866

Schillinger, Dean; **Chittamuru, Deepti**; **Ramírez, A. Susana** (2020). "From 'infodemics' to health promotion: a novel framework for the role of social media in public health". *American journal of public health*, v. 110, n. 9, pp. 1393-1396.
https://doi.org/10.2105/AJPH.2020.305746

Segura-Mariño, Adriana-Graciela; **Paniagua-Rojano, Francisco-Javier**; **Fernández-Sande, Manuel** (2020). "Metodología para evaluar la comunicación universitaria en *Facebook* y *Twitter*". *Prisma social*, n. 28, pp. 127-144.
https://revistaprismasocial.es/article/view/3357

Solomon, Daniel H.; **Bucala, Richard**; **Kaplan, Mariana J.**; **Nigrovic, Peter A.** (2020). "The 'infodemic' of Covid-19". *Arthritis rheumatology*, v. 72, n. 11, e41468.
https://doi.org/10.1002/art.41468

Spence, Patric R.; **Lachlan, Kenneth A.**; **Lin, Xialing**; **Del-Greco, Maria** (2015). "Variability in *Twitter* content across the stages of a natural disaster: implications for crisis communication". *Communication quarterly*, v. 63, n. 2, pp. 171-186.
https://doi.org/10.1080/01463373.2015.1012219

Suau-Gomila, Guillem; **Percastre-Mendizábal, Salvador-José**; **Palà-Navarro, Gemma**; **Pont-Sorribes, Carles** (2017) "Análisis de la comunicación de emergencias en *Twitter*. El caso del ébola en España". En: Sierra-Sánchez, Javier; Liberal-Ormaechea, Sheila. *Uso y aplicación de las redes sociales en el mundo audiovisual y publicitario*. Madrid: McGrawhill Education, pp. 119-130. ISBN: 978 84 486 1357 0
http://eprints.rclis.org/31269/1/Comunicacion-emergencias-Twitter-ebola-Espana.pdf

Tuñón-Navarro, Jorge; **Bouza-García, Luis**; **Carral, Uxía** (2019). *Comunicación europea ¿A quién doy like para hablar con Europa?* Madrid: Dykinson. ISBN: 978 84 9148 977 1

Velardi, Paola; **Stilo, Giovanni**; **Tozzi, Alberto E.**; **Gesualdo, Francesco** (2014). "*Twitter* mining for fine-grained syndromic surveillance". *Artificial intelligence in medicine*, v. 61, n. 3, pp. 153-163.
https://doi.org/10.1016/j.artmed.2014.01.002

Vos, Sarah C.; **Buckner, Marjorie M.** (2016). "Social media messages in an emerging health crisis: tweeting bird flu". *Journal of health communication*, v. 21, n. 3, pp. 301-308.
https://doi.org/10.1080/10810730.2015.1064495

Waisbord, Silvio; **Amado, Adriana** (2017). "Populist communication by digital means: presidential *Twitter* in Latin America". *Information, communication & society*, v. 20, n. 9, pp. 1330-1346.
https://doi.org/10.1080/1369118X.2017.1328521

Wigand, Dianne-Lux (2010). "Twitter in government: building relationships, one tweet at a time". In: *Seventh international conference on information technology: New generations*, pp. 563-567.
https://doi.org/10.1109/ITNG.2010.171

World Health Organization (2020). *Risk communication and community engagement readiness and response to coronavirus disease (Covid-19)*. Interine guidance, 19/03/2020.
https://www.who.int/publications/i/item/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses-(-ncov)

Xifra, Jordi (2020). "Comunicación corporativa, relaciones públicas y gestión del riesgo reputacional en tiempos del Covid-19". *El profesional de la información*, v. 29, n. 2, e290220.
https://doi.org/10.3145/epi.2020.mar.20

Yi, Myongho; **Oh, Sam-Gyum**; **Kim, Sunghun** (2013). "Comparison of social media use for the U.S. and the Korean governments". *Government information quarterly*, v. 30, n. 3, pp. 310-317.
https://doi.org/10.1016/j.giq.2013.01.004

Zeraatkar, Kimia; **Ahmadi, Maryam** (2018). "Trends of infodemiology studies: a scoping review". *Health information and libraries journal*, v. 35, n. 2, pp. 91-120.
https://doi.org/10.1111/hir.12216

Some viable models for digital public-interest journalism

Mercedes Medina-Laverón; Alfonso Sánchez-Tabernero; James Breiner

How to cite this article:

Medina-Laverón, Mercedes; **Sánchez-Tabernero, Alfonso**; **Breiner, James** (2021). "Some viable models for digital public-interest journalism". *Profesional de la información*, v. 30, n. 1, e300118.

https://doi.org/10.3145/epi.2021.ene.18

Artículo recibido el 26-04-2020
Aceptación definitiva: 09-09-2020

Mercedes Medina-Laverón ✉
https://orcid.org/0000-0003-1754-6811

Universidad de Navarra
School of Communication
Marketing and Media Management Department
31009 Pamplona, Spain
mmedina@unav.es

Alfonso Sánchez-Tabernero
https://orcid.org/0000-0003-3392-1861

Universidad de Navarra
School of Communication
Marketing and Media Management Department
31009 Pamplona, Spain
astabernero@unav.es

James Breiner
https://orcid.org/0000-0001-6774-8978

Universidad de Navarra
School of Communication
Marketing and Media Management Department
31009 Pamplona, Spain
jbreiner@unav.es

Abstract

The supply of public interest journalism that serves the needs of citizens in a democratic society has always been scarce in the media marketplace when compared with sensationalism, gossip, entertainment, propaganda, and misinformation. This scarce commodity, whose market value lies in its credibility and depends on costly investments of time and money in professional research, has frequently required a subsidy, which for more than a century was provided by advertising. Now that this subsidy has mostly been devoured by technological platforms such as *Google* and *Facebook*, the industry and profession are developing new models focused on user needs and wants with a trend toward public service rather than profit. This paper uses deductive and critical methodologies to identify the most promising business models used by media companies to counteract the decline in public-interest journalism. Our proposal is that an appropriate business model can be the best way to revitalize media companies. The research is based on Chesbrough's business model framework applied to 20 leading digital news publications from 16 countries. In addition, we analyze how Covid-19 has impacted those business models.

Keywords

Public interest journalism; Business models; Media transformation; Digital journalism; Audience engagement; Press's business; Paywalls; Subscriptions; Freemium; Low cost; Nonprofit; Newspaper industry; Opportunities; Online journalism; Transformation of journalism; Innovation; Entrepreneurship; Covid-19 impact.

Funding

This work is a result of the project RTI2018-101124-B-I00: *From an architecture of listening and audience interaction to social footprint: good practices in audiovisual content production* (*Interact*) funded by the Spanish *Ministerio de Ciencia, Innovación y Universidades* (2019-2021).

1. Introduction

Public interest journalism has an ethical and social dimension based on the credibility of content and its public service mission, but its share of time and space in the media marketplace seems to be shrinking. The causes are mainly the abundant supply of free media online and the flight of advertisers to the lower-cost and more efficiently targeted digital advertising offered by technological platforms. Many prestigious legacy news brands have less resources each year, so, as a consequence, they have entered into a never-ending spiral of diminishing quality delivered (**Díaz-Noci**, 2019). The scarcity of good journalism has aggravated many societal ills and undermined the role of the media as a pillar of democratic society.

Industry analysts (**Cornia**; **Sehl**; **Nielsen**, 2019) identify three main mistakes made by media managers during the *digital revolution*. First, some firms have followed the "wait and see strategy": they have moved very slowly because they did not know how to face the arrival of digital disruptors, and therefore they have experienced a period of decadence. Other companies looked for inspiration in the global brands, but such strategies almost always led to failure, because the imitators did not have the resources and the reach of brands like *The New York Times*, *Wall Street Journal* or *Financial Times* (**Nafría**, 2017). Finally, a third frequent error came from the corporations that tried to do many things, but they did not have a proper business model that gave coherence to those tactical decisions.

After a review of literature about public interest journalism and the journalistic media business, we focus on the evolutionary processes of the business models as a necessary response to disruptive changes in the industry. Finding a business model which fits in the new market conditions may be the solution for the survival of many news firms. The main aim is to cast some light on possible ways to compete in a media landscape characterized by an increasing number of both rivals and substitutes.

2. Theoretical framework

The theoretical foundation of our research is based on the concept of public interest journalism and the need for a defined business model. That is why we review different theories about business models and finally we justify why Chesbrough's model is selected. The theoretical framework ends with a brief overview of the crisis of traditional business models in the media industry.

Public interest journalism

In the last two decades, the journalism profession has experienced a deep transformation. However, the standards for public service journalism remain much the same: objectivity, fairness, trustworthiness, independence, social responsibility, and ethical sensibility (**Deuze**, 2005). **Ramírez-de-la-Piscina** *et al.* (2014) define the social role of the press with the following characteristics: watchdog on power, promotion of social debate, respect for human dignity, presence of cultural references from other countries, and combating social marginalization. Public interest journalism causes changes in the society, and it might be recognized, among other things, through prizes and awards.

One of the consequences of the crisis of journalism comes from the fact that permanent jobs are scarce and internships are underpaid (**Deuze**; **Witschge**, 2018). Quality decreases if media firms have smaller newsrooms and if their employees receive poor salaries. On the other hand, digital transformation has helped journalists to be more independent and escape from strong corporate control.

In the new digital landscape, the function of journalism as watchdog of democratic societies may be diluted (**Salazar**, 2019). According to **Graves** (2016), journalism will share the control of the public debate and the access to the public sphere with many other fact-checking agents. At the same time, many non-professional providers of fake news can erode the prestige and credibility of media brands as a whole.

In addition, years ago **Soria-Martínez** (1993) and more recently **Costera-Meijer** (2001) outlined the difficult relationship between commercialism and public mission. Some media editors think that to take audiences into account generates a great risk for the professional codes of objectivity and independence. For **Konieczna** (2018), quality journalism is not compatible with market and competition forces, though she recognizes that some media with market models manage to do it.

To serve the audience is the touchstone of journalism. **Costera-Meijer** (2012, p. 757) points out that "excellent journalism faces the challenge of losing its audience if it does not take into account the public's changing habits of media consumption". As **Lambeth**, **Thorson** and **Meyer** (1998) found, many North American newspapers, radio stations and television networks increased their audiences after they decided to strengthen their public mission. However, **Benson** (2019, p. 147) questions the democratic cost of urging audiences to pay for the news. According to him,

> "even if subscriptions contribute to higher quality news, [if] that news fails to reach a broad audience, it's not really a solution to the civic crisis of an uninformed, often misinformed, and distrustful citizenry".

The quality of journalism has an "objective perspective", which refers to the fulfilment of some requirements, the mission of defining the public agenda, or the adjustment to a given benchmark (**Bardoel**, 1996). However, the concept of quality also has a "subjective dimension" which can be defined as "meeting the public's needs and demands" (**Abbé-Decarroux**, 1994). Those two dimensions –objective and subjective– may create some tensions in media companies: sometimes it may be difficult to make compatible the media's public mission and the need to please the audience.

Business model concept

Several authors (**Zott**; **Amit**; **Massa**, 2011; **Holm**; **Günzel**; **Ulhøi**, 2013; **Casero-Ripollés**; **Izquierdo-Castillo**, 2013) consider that business model innovation helps media companies to discover new ways to create and capture value. In **Salazar**´s words, media companies need to deliver news in the manner of a public utility rather than as a market commodity (2019). In fact, permanent technological innovation requires more dynamic business models, which allows new economic exchanges or "intermediations" (**Soloviev** *et al.*, 2010).

An appropriate business model can be the best way to revitalize media companies. According to **Osterwalder**, **Pigneur** and **Tucci** (2005, p. 1), a business model

> "is a conceptual tool containing a set of objects, concepts and their relationships with the objective to express the business logic of a specific firm".

Therefore, the company should clarify the value created for customers, how it is produced, and what is the financial outcome.

Other broad definitions equate business models with the way a company does business (**Gebauer** *et al.*, 2017). **Magretta** (2002) does not see relevant differences among strategy and business models; however, the first is always unique (there are no two identical competitive situations) while the second refers to "models" that can be imitated and may potentially apply to many companies.

Both business models and strategic thinking take into consideration the context: the level of competition in the market, barriers to entry, existence of substitutes, bargaining power of suppliers and distributors, or legal framework. Because of that, they are dynamic: they evolve when a relevant part of the competitive context changes. Lack of innovation in the business model leads towards poor efficiency; and the opposite is also true:

> "a mediocre technology pursued within a great business model may be more valuable than a great technology exploited via a mediocre business model" (**Chesbrough**, 2010, p. 354).

Teece (2010, p. 172) ensures that

> "whenever a business enterprise is established, it either explicitly or implicitly employs a particular business model that describes the design or architecture of the value creation, delivery, and capture mechanisms it employs".

Therefore, the business model clarifies the way in which the firm delivers value to the customers, promotes the customers' willingness to pay for the value perceived, and generates profit.

Zott and **Amit** (2010, p. 216) define business model

> "as a system of interdependent activities that transcends the focal firm and spans its boundaries. The activity system enables the firm, in concert with its partners, to create value and also to appropriate a share of that value".

When the business model is coherent and suitable for given market conditions, it helps both to capture the attention of the customer and to make a profit out of it.

Afuah and **Tucci** (2001) insist on the idea that a business model is a

> "system that is made up of components, linkages between the components, and dynamics";

such a holistic view of the firm brings the necessary coherence to many operations concerning researching, planning, budgeting, training, manufacturing, or marketing. It also reinforces the concept of permanent innovation: the context demands changing the nature of the products or services delivered and the activities performed.

However, according to **Evens**, **Raats** and **Von-Rimscha** (2017, p. 167),

> "little media management research has looked at transformation change from a business model innovation perspective".

There is some research about how news business models have changed in the new digital scenario. For example, **Mütterlein** and **Kunz** (2017) studied the entrepreneurial orientation of media companies following **Osterwalder** and **Pigneur**'s (2010) theory about value creation, value proposition and value capture; **Cestino** and **Berndt** (2017) applied the *service dominant logic* (SDL) to the relationship among media companies and their audiences.

Chesbrough (2010) describes the basic functions of each business model: it articulates the value proposition, it identifies a market segment and the revenue generation mechanism, it selects the firm's position in the value chain, it estimates the cost structure and the profit potential, and it formulates the competitive strategy. We consider that such a proposal helps to clearly define and differentiate the model chosen.

For our research, we will adapt Chesbrough's functions to media markets. We find three reasons for choosing this concept: first, it is one of the most classic definitions of "business model": it has been used in a big variety of pieces of research, covering many companies all over the world; second, it is very "operational", because it identifies eight strategic options which differentiate each business model; and finally it is very applicable for creative industries because it emphasizes intangible aspects while it limits the relevance of other facets like tangible assets, production or logistics.

Crisis of traditional business models in the media industry

Before the mid-nineties, news media companies had a clear business model, which had lasted for more than two centuries (**Karimi**; **Walter**, 2016). The traditional model can be summarized in four steps:

i) editors identified the needs of the audience;

ii) newsrooms provided the contents: facts, images, opinions, contexts and perspectives;

iii) managers were in charge of efficiency, in order to avoid unnecessary expenses;

iv) marketing and advertising executives sold the product to readers and advertisers to make a profit. Newspapers sold information at low prices (below their costs), and advertising revenues covered the remaining costs and provided a profit.

The Internet changed the rules of the game because citizens found new outlets of free news and because advertisers discovered more effective online channels. Most news companies did not change their obsolete business model and focused on the "try harder" strategy (**Hamel**, 1996). Such decisions led towards a general decline both in readership and revenues. **Picard** (2010) criticized media companies that consider themselves as inevitable victims of disruptive technologies; when such organizations forget the notion of value creation, news becomes a commodity.

Because there has been a big disruption in the media industry, it has been difficult to adjust the media firms' business models for the digital environment. According to Cook and Sirkkunen,

> "mainstream media have been faced with a dilemma that has largely resulted in three responses: keep revenue streams and business models unchanged, repurpose an offline business model for the new online environment, or innovate with entirely new revenue streams" (**Cook**; **Sirkkunen**, 2013, p. 64).

Nel (2010), following **Rappa** (2000), identifies eight revenue streams among regional newspapers: advertising and sponsorship model, subscription and utility, infomediary, merchant, affiliate, brokerage, content manufacturing, and community. At the same time, advertising remained the most popular source of online revenue for newspapers. However, both print and online outlets are frequently unable to recover the advertising money that has shifted towards *Google*, *Facebook*, *Amazon* and other internet platforms.

The research on the different business model based on revenues applied to media companies is abundant. Among others, **Cook** and **Sirkkunen** (2013) investigate if the concept of the *long tail*, popularized by **Anderson** (2006), can be applied to online news sites. They analyze how to diversify revenue streams. **Arrese** (2016) explores the evolution of paywalls in news media, and **Olsen** and **Solvoll** (2018) interviewed twenty local newspapers' managers in order to understand how paywalls affected their value proposition.

Some media managers are turning their attention away from advertising and toward subscriptions. As **Simon** and **Graves** (2019, p. 2) point out in their study of payment models for online news, newspapers across Europe and the US are

> "gradually moving away from digital news offered for free and supported primarily by display advertising".

This trend has been evident in the *Digital News Report*´s survey of leaders in 200 media outlets. Publishers were asked in what areas they would focus their attention in 2019: 52% of them named subscriptions, 27% display advertising, 8% native advertising, 7% donations, 3% related business, 2% electronic commerce, and 2% events (**Newman**, 2019). **Jenkins** and **Nielsen** (2020) describe how media look for alternative commercial strategies, but they are skeptical about new revenue streams.

On the other hand, **Chyi** (2013) and **Chyi** and **Ng** (2020), who studied the struggle between print and online US newspapers, came to the conclusion that not many people are willing to pay for digital information: audiences perceive online news as *inferior goods*. She considers that editors should not move to digital without knowing where the business will come from (**Chyi**; **Tenenboim**, 2019). For her, the key is to make the content noteworthy, relevant, and interesting for readers. This is what many newspapers have been doing for decades, and this is why readers read them, are loyal, and pay for them. **Picard** and **Dal-Zotto** (2006) reach a similar conclusion: they point out that 82% of publishers associated with *IFRA* said that the editorial part of the organization is the most strategically important for the newspaper business.

Following **Picard** (2010) and **Schiffrin** *et al.* (2017), strategies to increase audience participation and engagement are taken as a sign of public interest journalism. Following the digital transformation of media companies, other authors focus on audience appeal. **Doyle** (2013) examines how paywalls affect users' engagement and how engagement is related to the number of stories covered per day. Similar interests lie behind the research conducted by **Pattabhiramaiah**, **Sriram** and **Manchanda** (2019), **Cerezo** (2019) and **Nixon** (2020).

Audience engagement involves a willingness to incur a cost, in time or money, to consuming a news medium. As **Vara-Miguel** (2016) outlines, when a user is loyal, and returns again and again to a news medium, that user is more likely to buy other products offered, and to recommend it to other users. That loyalty, driven by participation, is a demonstration of perceived quality by the audience. The users find the information valuable in meeting the needs of their daily lives, solving their problems, or acting as a watchdog on the powerful.

In summary, it seems that neither scholars nor practitioners have consensus on which business models are the most appropriate today to guarantee public interest journalism. But as Doyle points out,

> "the experience of some players indicates commonalities of experience that offer potentially valuable lessons for media businesses all over the world" (**Doyle**, 2013, p. 1).

Therefore, we will follow the empirical method of looking for examples that can serve as paradigms.

3. Objectives and methodology

The aim of this study is to present empirical cases of media companies in four regions of the world that try to offer public interest journalism based on a clear business model and financed by different income streams. Thus, the objective of the research is to critically analyze if there are common elements that can be replicable by other news media organizations. The value of this research is to have examples from different cultural, political, and economic contexts.

We use primary sources coming from the websites themselves, from public reports, and from questionnaires sent to the media managers of the selected cases. The research was interrupted by the Covid-19 pandemic, so we included some questions related to the impact of that in the management of the companies.

In our study, we wanted to explore two hypotheses through the examination of practical examples. The first one is whether there are *new business models* that work for public interest journalism. In contrast with those who seek to compete as always, but exert more effort, the most innovative companies have devised other ways of creating value for citizens (**Hamel**, 1996). Their methods are more suited to fragmented markets that have fewer barriers to entry.

This business model is different from the old business model based on general offers, high market shares, large numbers of journalists, little diversification in the sources of income, and high dependence on advertising.

Each media company has its own strategy, its unique way to compete in its market. However, several strategic options may belong to the same *replicable model*, because they may share common fundamental elements. The analysis of several cases can help to detect viable models that can be replicated in different places and, therefore, they may become sources of inspiration for publishers and editors who wish to make public interest journalism.

The models can differ, above all, by their editorial priorities, by their general or specialized nature, by their scope of dissemination, by their position in the value chain, by their sources of income, and by their cost structure. These ways of competing do not constitute "arrival points" or "definitive solutions" but are in a permanent process of evolution, because of the increasing dynamism of the industry (**Holm**; **Günzel**; **Ulhøi**, 2013).

Based on previous literature (**Picard**, 2010; **Schiffrin** *et al.*, 2017, among others), our second hypothesis is that for the new business models, audiences' *engagement* has to be particularly *relevant*. Increased competition hinders brand loyalty. For this reason, companies committed to public interest journalism satisfy the demands and information needs of the public and engage their audiences with their editorial project.

To look into those hypotheses we have designed a comparative and critical case study approach that reviews a selection of 20 digital news publications from 16 countries. The examples come from Europe and the Americas and from traditional as well as new digital media.

The selected cases fulfill four main criteria:

- First, their leaders state that their goal is editorial and financial independence, free from commercial and political interference.
- Second, stakeholders and prestigious market research and reports recognize them as credible and professional.
- Third, their stated mission is to provide public interest news content that has a positive impact on society, as measured by the audience reach and users' engagement.
- Fourth, their business model has produced at least breakeven financial results or external investor subsidies for four years or more.

The twenty cases analyzed have abandoned the traditional business model of offering general content with essentially two revenue sources: direct payments by users and advertising. Many of them are focused on specialized content in depth, produced by small teams of journalists.

Our study does not focus on global brands, which achieve economies of scale by accumulating audiences in diverse geographic markets, since they are difficult to replicate in media markets limited by geographic size, language, or topic.

The main sources of the primary data were the websites of the companies, news publications, academic research and industry reports[1], and *SimilarWeb.com* for users' data. Afterwards, we were interested in the evolutionary processes of these publications' business models as a necessary response to disruptive changes in the industry. To understand this better, we sent a questionnaire to the 20 editors or managers of the selected media companies seeking firsthand information on profit margin, percentage of different revenue streams, editorial priorities, and how the Covid-19 pandemic affected their business. The questions about the pandemic were also intended to discover the reaction of media brands facing a global economic crisis.

The questionnaire, sent in April and May 2020, was designed to build on the Chesbrough model. Table 1 shows the questions designed to elicit different elements of the model. We just adapt the model's eight strategic options to the characteristics of media markets and we group them in five categories.

Table 1. Criteria to define a business model

General markets	Adapted to media markets
Articulates the value proposition	Differentiated information unavailable elsewhere, useful personally and professionally
Identifies a market segment and specifies the revenue generation mechanism	Audience for content of geographic or thematic focus; advertising, user payments, diverse sources.
Describes the position of the firm within the value chain	For digitally focused firms, combines creation, production, distribu-tion, display.
Estimates the cost structure and profit potential	Newsroom size, profit margin, low cost
Formulates the competitive strategy by which the innovating firm will gain and hold advantage over rivals	Collaboration, expertise, continuous innovation

Source: adapted from **Chesbrough** (2010)

Among value propositions and revenue generation mechanisms, we consider the following options, which are not mutually exclusive:

We divided the news content focus into the following categories

- investigative journalism, exposing corruption;
- broad coverage of current news;
- niche coverage of specialized topics; and
- geographic focus, targeted at local or regional audiences.

For the finance and economic aspects, we created the following categories:

- maintaining low costs (small newsroom);
- multiple revenue sources;
- mostly advertising revenue;
- no advertising, user-funded only;
- freemium subscription model;
- metered subscription model;
- hard paywall;
- all contents free; and
- non-profit: financed by individual donations, NGOs, foundations, or public institutions.

The engagement score given to each publication follows the model of **Harlow** and **Salaverría** (2016) and represents the total number of opportunities to participate offered to users on the site itself, independent of social media: donate, subscribe (paid subscription), comment and interact with others, respond to surveys, report errors, email specific staff members, contribute content, and offer news tips.

For the profit potential, we asked the media to identify the estimated average profit margin of the publication over the past five years and gave seven options:

- it has lost money;
- from 0-9%;
- 10-20%;
- 21-40%;
- margin of more than 41%;
- not applicable, the organization is non-profit, and
- other.

To define the editorial priorities, editors or publishers could choose any of the following options:

- topics of interest to the audience and thus have the most potential for generating revenue;
- coverage that the newsroom considers of major news value;
- coverage that can generate change (political, economic, social) to benefit society;
- coverage that acts as a watchdog that holds politicians and business people accountable to the public for their actions.

And finally, we asked them to indicate how Covid-19 affected their business. They could choose all that apply:

- decline in advertising revenue;
- increase in users/readers;
- increase in paid subscribers;
- greater participation/engagement of users with content;

- temporary furloughs of journalists;
- layoffs of journalists (likely to be permanent);
- strengthening of local and community news coverage;
- increased risk that our publication will not survive;
- increased pressure from the government to influence coverage;
- increase of public subsidies;
- other.

Furthermore, we asked them to indicate the percentage, if they noted significant increases or decreases in readership, advertising, or other factors.

4. Profile of public interest news media and their business model

We selected twenty media outlets, which belong to four different regions, each one of them having specific characteristics. The EU has the oldest tradition of liberal economies and democratic values; it has also a strong presence of state-owned broadcasting corporations. The region of Eastern and Central Europe has evolved from its communist past towards a market-oriented system, and it has been adopting the principles of free speech and free press (**Foer**, 2019). In Latin America, traditional news media throughout the region have tended to be concentrated in the hands of powerful families and political groups that mutually reinforce and promote each other (**Márquez-Ramírez**; **Guerrero**, 2017). But in the past decade, the region has seen a flourishing of new independent media born on the internet (**Warner**; **Iastrebner**, 2017). Finally, the US is by far the world's largest media market by revenues, and its business models have been driven more by the market than by public service. In just over a decade beginning in 2006, US newsrooms lost 27,000 jobs, or nearly a quarter of the total, mainly at newspapers, which tend to be the biggest producers of local news (**Grieco**, 2018).

Table 2 shows the main data of the twenty cases, ordered by the year they were founded; it refers to content focus, revenue streams, amount of revenues, number of journalists, number of subscribers, donors and partners, and monthly visits before and after Covid-19.

The application of Chesbrough's model to the selected publications tells us that 16 of them are end-user media and therefore located in the same place in the value chain. The other four –*ProPublica*, *Texas Tribune*, *Chequeado*, and *OCCRP*– occupy two segments of the value chain, since they both publish information on their own sites and actively encourage other media organizations to publish it as well. However, all of them differ in their value proposition, market segment, revenue generation mechanism, cost structure, profit potential, and competitive strategy.

Many of them have diversified their revenue streams. All of them have embraced the power of digital media to reduce costs of production and distribution. Only two of the cases are traditional print newspapers, and both have focused on developing digital subscription revenues: the *Berkshire Eagle* in the US (founded in 1892) *and Gazeta Wyborcza* in Poland (1989). *El Faro* of El Salvador, is the oldest digital native of the selection, established in 1998. The rest of them were founded in the 2000s, but all of them have been at least five years in the market.

Eleven of the 20 have some form of digital subscription model; five of those are freemium models in which certain content is available only to premium subscribers. *eldiario.es* of Spain has a unique freemium membership model that offers content free to everyone, but members (*socios*) can access certain content a few hours before the general public. Its membership model generates 50% of the revenue with a value proposition that members are supporting independent journalism. *Talking Points Memo* in the US is notable for generating three-fourths of its revenue from its freemium product that gives readers bonus content.

JOTA in Brazil, *Apache* in Belgium, *De Correspondent* in the Netherlands, *Mediapart* in France, and *Perspective Daily* in Germany have paywalls, do not accept advertising and generate nearly all their revenue from user payments in various forms. However, the paywalls vary in their hardness. *Perspective Daily* is the only one of our selected sites not founded by veteran journalists. Two scientists launched it and attracted 14,000 paying members with the promise of solutions journalism based on science.

Four subscription brands mainly cover "national" issues: *JOTA* focuses on the three branches of government in Brazil, and how they affect business, taxes, industry, and the economy. *De Correspondent*, a Dutch-language site, raised US$5.5 million from 60,000 people in what was then a world record in crowd-funding for a media organization. *Apache* has the capital structure of a cooperative. It sells shares to one thousand shareholders, who receive some benefits, such as discounted subscriptions. *Dennik N*'s editorial appeal is based on a mix of investigations of corruption and reporting on the Slovak economy and politics (**Fila**, 2019a; 2019b).

The Skimm in the US has 7 million email subscribers, who pay nothing for a daily newsletter, which generates revenue from advertising, a calendar and other services. The audience is mainly professional women ages 25-35, who enjoy its mix of serious news with a humorous touch (**Kafka**, 2018). It is the most commercial of the cases studied, but its public service mission is exemplified in its selection and rejection of advertisers based on shared values; its ecommerce store, which promotes charities and fair-trade and gender-neutral products; and its editorial initiatives to promote voter participation.

Table 2. Profiles of news media studied

Publication	Year founded	Accepts advertising	Paywall	Content	Number of journalists	Revenues*	Subscribers, members, partners*	Monthly visits		Covid impact. Change post Covid-19 (%)
								Dec 2019**	April 2020**	
Berkshire Eagle, US	1892	yes	yes	general, local, investigative	11-25	N/A	15,000 print, 4,000 digital	290K	436K	150.3
Gazeta Wyborcza, Poland	1989	yes	yes	general, local, investigative	26-50	$20 million	192,000 digital, 101,000 print	81.7M	88.8M	8.7
El Faro, El Salvador	1998	yes	no	investigative, politics, business	11-25	$1.1 million	900 donors	200K	679K	339.5
Talking Points Memo, US	2003	yes	freemium	politics, business	11-25	$2.6 million	26,000 digital	3.5M	4.5M	128.6
OCCRP, Romania, Bosnia-Herzegovina	2006	no	no	investigative	26-50	$4.5 million	45 partner organizations	240K	329K	137.1
Mediapart, France	2008	no	yes	investigative, politics, business	51-100	$20 million	210,000 digital	6.5M	12.5M	192.3
ProPublica, US	2008	no	no	investigative	100+	$26.5 million	29,000 donors	2.8M	6.6M	235.7
Animal Político, Mexico	2009	yes	no	investigative, politics, business	11-25	N/A	N/A	2.6M	4.1M	157.7
La Silla Vacía, Colombia	2009	yes	no	investigative, politics, business	11-25	$639,000	900 donors	610K	1.1M	180.3
Juzne vesti, Serbia	2009	yes	no	general, local, investigative	11-25	$500,000	0	1.2M	2.2M	183.3
Texas Tribune, US	2009	no	no	public policy, investigative, analysis	26-50	$9.1 million	6,053 members	1.2M	4.3M	350.0
Apache, Belgium	2010	no	yes	investigative	1-10	N/A	1,000 shareholders	150K	159K	6.0%
Atlatszo, Hungary	2011	no	no	investigative	1-10	$400,000	3,000 digital	340K	548K	161.2
Chequeado, Argentina	2011	no	no	fact-checking, training, investigative	11-25	$1 million	350 individual donors	460K	785K	170.7
TheSkimm, US	2012	yes	freemium	general, analysis	26-50	$28M investment	7 million email subscribers	550K	858K	156.0
eldiario.es, Spain	2012	yes	freemium	investigative, politics, business	51-100	$7.3 million	55,000 digital	31.1M	51.6M	165.9
De Correspondent, Netherlands	2013	no	freemium	analysis, comment	26-50	$5.5 million	60,000 digital	550K	809K	147.1
Dennik N, Slovakia	2014	yes	yes	general, local, investigative	51-100	$2 million	35,000 digital	11.4M	15.7M	137.7
JOTA, Brazil	2014	no	yes	law, taxes, government	26-50	$2 million	4,000 digital	470k	1.4M	297.9
Perspective Daily, Germany	2015	no	freemium	science, solutions journalism	1-10	$1 million	14,000 digital	75k	138k	184.0

Source: companies' websites.
*Revenue data is from 2018 or 2019 and comes from media themselves or conservative estimates based on an average subscription rate.
**Source: *SimilarWeb.com*, desktop and mobile web, December 2019 and April 2020.

La Silla Vacía of Colombia, *Animal Político* of Mexico, and *eldiario.es* of Spain have been recognized as among the most influential and popular digital publications in their respective countries (*Reuters Digital News Report*, 2018; *Cifras y Conceptos*, 2017).

Atlatszo, of Hungary, benefits from a banking system that allows micro donations by credit card and a 1% optional donation by taxpayers. *Juzne vesti* of Serbia depends almost totally on foreign NGOs and foundations. Banking laws and government red tape make it difficult to solicit domestic donations. In terms of revenue models, the nonprofits have been innovative. *Texas Tribune* of the US has developed a diverse and balanced portfolio of revenue sources that includes donations 31%, grants 25%, events 22%, and advertising 18%.

Table 3. Companies' business models, engagement, editorial priorities, Covid-19 response

				Editorial priorities of managers; "Very important" = 5 on a scale of 1 to 5**				Impact of Covid-19 on your publication			
Publication	**Business model**	**Participation/ engagement score***	**Profit margin or surplus**	**Revenue potential**	**Journalists' judgment of news value**	**Societal change**	**Watchdog on power**	**Lost ad revenue**	**Increase in paid subscribers**	**Greater participation, engagement of readers**	**Furloughs or layoffs of employees**
Berkshire Eagle, US	diverse revenue	2	0-9%	4	5	5	5	yes	yes	no	yes
Gazeta Wyborcza, Poland	diverse revenue	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TheSkimm, US	diverse revenue	4	N/A	N/A	N/A	N/A	N/A	yes***	N/A	N/A	yes***
Dennik N, Slovakia	diverse revenue	3	10-20%	5	5	4	5	no	yes	yes	no
El Faro, El Salvador	niche, low-cost	3	0-9%	2	5	5	5	yes	no	yes	no
Talking Points Memo, US	niche, low-cost	3	profitable	4	4	4	4	yes	yes	no	no
Animal Político, Mexico	niche, low-cost	3	lost money	3	5	5	5	yes	yes	no	no
La Silla Vacía, Colombia	niche, low-cost	5	10-20%	3	5	5	5	no	no	no	no
Apache, Belgium	niche, low-cost	4	lost money	4	5	4	5	no	yes	no	no
eldiario.es, Spain	niche, low-cost	4	10-20%	4	4	5	5	yes	yes	no	no
De Correspondent, Netherlands	niche, low-cost	3	0-9%	1	5	5	4	no	yes	yes	no
JOTA, Brazil	niche, low-cost	3	lost money	5	3	4	3	no	yes	yes	no
Perspective Daily, Germany	niche, low-cost	3	lost money	5	4	5	4	no	yes	no	no
OCCRP, Romania, Bosnia-Herz.	nonprofit	3	NA	4	4	5	5	no	no	yes	no
Mediapart, France	nonprofit	3	10-20%	5	5	5	5	no	yes	yes	no
ProPublica, US	nonprofit	6	NA	4	5	5	5	yes	no	yes	no
Juzne vesti, Serbia	nonprofit	3	10-20%	4	4	5	5	yes	no	yes	no
Texas Tribune, US	nonprofit	6	0-9%	2	5	5	5	yes	no	yes	no
Atlatszo, Hungary	nonprofit	4	NA	3	4	4	5	no	no	no	no
Chequeado, Argentina	nonprofit	6	NA	5	4	3	5	no	no	yes	no

Source: own questionnaire. N/A - not available

*Engagement/participation score, 1-8, is the total of the following eight options for participation offered to users: donate, subscribe (paid subscription), comment and interact with other users, respond to surveys, report errors, email specific staff members, contribute content, and offer news tips (crowdsourcing).

**The numeric rating we assigned to the five choices was: very important (5), important (4), so-so (3), less important (2), not important (1).

***This information on *The Skimm* came from other media sources; the publication itself did not respond.

We have selected seven examples of non-profit journalism and some of them have adopted collaborative models to share the cost and risks of their investigative journalism. *ProPublica,* the investigative news organization in the US, works on investigations with other media organizations. The *Organized Crime and Corruption Reporting Project* (*OCCRP)* of Romania and Bosnia-Herzegovina collaborates with some 45 investigative centers in 34 countries; *Chequeado*, the fact-checking site in Argentina, has trained the staffs of more than a dozen other media organizations in Latin America. *Mediapart* in France converted in 2019 from a for-profit to a nonprofit model as a way of protecting its independence, and it focuses on French politics, the economy, and corruption.

Within the 20 cases analyzed, brands with largest revenues are *ProPublica*, *Gazeta Wyborcza* and *Mediapart*. Newsrooms' sizes go from more than one hundred journalists (*ProPublica*) to the cases of *Atlatszo* and *Perspective Daily* that have less than ten journalists. We also identify a big variety of audiences: *Gazeta Wyborcza* reached 81 million readers in 2019 and *eldiario.es* 31 million while *Perspective Daily* only got 75,000 visits that year. In April 2020, the number of visits increased in a relevant number because of the informative interest of the Covid-19.

5. Three public service journalism models

The twenty cases analyzed based their business model on direct payments by users and advertising, most of them are less dependent on advertising and are diversifying their revenue sources as our first hypothesis outlined. Many of them are focused on quality rather than quantity.

Table 3 adds more data coming from the questionnaire: it shows each media firm's business model, engagement score, profit margin, and dominant editorial criteria. It also gives relevant information about the effects of Covid-19, in terms of income, readers' engagement and layoffs.

Each company has designed a specific competitive strategy suited to its market, but they share certain characteristics. From the chosen examples, we can identify three business models than can be summarized as follows:

Model 1. Companies with diversified revenue

In accordance with **Nel** (2010), we show that public interest journalism is expensive but can be financed if companies are able to find a variety of sources of income such as events, e-commerce, consulting, training, distribution, printing or audiovisual production, on top of subscription and advertising. These companies have a high commitment to a community. The examples of this model –*The Skimm*, *Dennik N*, *Gazeta Wyborcza,* and *Berkshire Eagle*–, publish relevant content unavailable anywhere else and accept advertising plus subscription. In contrast to **Chyi**´s (2013) and **Chyi** and **Ng** (2020) conclusions, we find that audiences are willing to pay for digital content if they consider it relevant, noteworthy and interesting, as **Picard** and **Dal**-**Zotto** (2006) suggested.

Model 2. Companies with great focus and low costs

For the nine companies that follow this model –*El Faro*, *Talking Points Memo*, *Animal Político*, *La Silla Vacía*, *Apache*, *eldiario.es*, *De Correspondent*, *JOTA* and *Perspective Daily*–, digital technology allowed them to achieve greater cost efficiency than traditional newspaper companies. The production, distribution, and marketing costs have been reduced dramatically. The key to Model 2 lies in avoiding the inertia of the past, which was based on the idea that it was necessary to cover all the relevant information for a given audience. Instead, these media focus on deep coverage of a particular niche with relevant content unavailable anywhere else.

Model 3. Nonprofit journalism

There are seven media brands following this model. They expect to generate value for a number of diverse audiences, instead of generating profits for shareholders. In recent years, an increasing number of philanthropists, foundations and public institutions have manifested some concern about the decline in public interest journalism and have realized that market forces cannot always provide it. They have rescued trusted brands such as *Time*, *The Atlantic*, *Los Angeles Times*, and the *Washington Post,* and formed partnerships to develop nonprofit media organizations (**Gelles**, 2018; **Schmidt**, 2019). The seven cases belonging to this business model have won prestigious journalism awards. For example, *ProPublica* has won six Pulitzer Prizes during its short life, and the *Organized Crime and Corruption Reporting Project* won a Pulitzer for its contribution to the Panama Papers investigation.

User focus is one of the common features of these examples. All have made the needs and problems of their users the primary focus of their work. They build communities around high-quality content. They put public service ahead of revenue generation: 14 news organizations say investigative journalism –a watchdog on the powerful– is a "very important" editorial priority, and 12 put "societal change" in that category. It is a telling sign of commitment to users and public service that only two of the 20 are considering layoffs because of the Covid-19 crisis.

However, our second hypothesis is not completely supported by the data. We considered that media firms need a greater engagement of the audience to compete in increasingly competitive media markets. But, as Table 3 shows, some publications are capable of producing public interest journalism without high participation from the readers, at least according the eight criteria we applied following **Harlow** and **Salaverría** framework (2018).

It is significant that the three organizations with highest scores for audience participation and engagement are all nonprofits –*Chequeado*, *Texas Tribune*, and *ProPublica*–. Given their necessity for broad public support, their business models have evolved to develop deep relationships with audiences. Contrary to what **Vara-Miguel** (2016) claimed, a paywall does not guarantee greater engagement with the public. At least the paywall-based companies do not have the largest scores in engagement. In any case, the analyzed brands have at least some points of readers' participation, and the Covid-19 pandemic helped 10 of them to increase audience engagement. But, as **Engelke** (2020) points out, there is still hard work to be done to capture value from user comments on newspapers to enrich the public debate.

Independence and trustworthiness are the other common values shared by the chosen media outlets. All of them describe themselves as providing unique content unavailable anywhere else. They ensure that they are highly differentiated from their peers and competitors. They see transparency, rather than objectivity, as the most important way to gain credibility, trust and loyalty. They reveal their mission, objectives, ownership structure, and the biographies of owners and editors; they describe the reporting process, and sometimes they share the documents they use in investigating a topic. Ten firms do not accept advertising in order to maintain independence. For another eight brands, advertising accounts for less than half of their revenues.

As for the financial viability of public interest journalism, the varied models have varied levels of success. Six of the analyzed firms –*Gazeta Wyborcza*, *TheSkimm*, *OCCRP*, *ProPublica*, *Atlatszo* and *Chequeado*– provided no details about their income margin, but the last four are nonprofits, and *TheSkimm* is supported by investors with $28 million of capital. *Apache*, *Animal Político*, *JOTA,* and *Perspective Daily* are not profitable, but *JOTA* is supported by $2 million from outside investors. *Berkshire Eagle*, *El Faro*, *De Correspondent* and *Texas Tribune* have profit margins between 0-9% (the last mentioned is nonprofit). Only six of them –*Dennik N*, *Talking Points Memo*, *La Silla Vacía*, *eldiario.es*, *Mediapart*, and *Juzne vesti*– are reaching profit margins between 10% and 21%.

The Covid-19 crisis has had a deep financial impact on the twenty firms. Nine of them lost a significant amount of advertising revenues. On the other hand, some of them were able to increase the number of subscribers during the pandemic. For example, *eldiario.es* appealed to its readers to replace with donations and new subscriptions the advertising revenue lost because of the Covid-19 and it was able to add 18,000 new paying members at a higher price, a clear sign of reader loyalty (**Kelly**, 2020). There were no notable differences among the regions in how Covid-19 affected the publications.

6. Final conclusions, limitations and further research

The market-driven model for legacy media that persisted for more than a century has been disrupted. Some media firms have kept the role of providing public service journalism. They consider that such a mission is more important than generating profits. At the same time, they understand that they need a viable business model in order to survive. New opportunities for quality journalism are emerging, but the potential revenues are unlikely to reach those that legacy media with dominant market positions used to get before the arrival of the Internet.

The percentage of people truly interested in news has always been small, but it is a valuable and influential segment, as they are the most socially, politically, and economically engaged (**Picard**, 2010). To attract financial support, news media need to create value for users by providing information that is relevant to their daily lives, helps them solve problems, and provides a counterweight to the politically and economically powerful. For this reason, the sustainable models of public interest journalism involve highly differentiated content. In addition, given the cost and risks the investigative journalism, international organizations that share resources and data are emerging to expose corrupt activities in politics and business.

In order to recruit and retain experienced and talented journalists able to produce high-quality content, particularly investigative stories, media organizations need business models innovative enough to adapt to the unique and dynamic conditions of their particular markets. The news companies presented here offer a range of options. In fact, each media organization has to find its own solutions, based on the size and resources of its target market, the legal, political, and economic environment, the talents and experience of its staff, and the technological limitations of its production, distribution, and financial channels.

There are some limitations to this research, starting with the subjective nature of the selection of the twenty media firms, even though the selection is based on previous research and objective data that identifies them as examples worth emulating. In addition, comparing the business models of the twenty examples is difficult because of the differences in their size, their purpose, and the markets they operate in.

An in-depth analysis of each case would provide more relevant information. For example, we could complete our study with a survey of readers to determine how much their perception of the editorial priorities of each publication agrees with the priorities expressed by the companies. These data would also allow us to detect which aspects are the ones that readers of these publications value the most.

In addition, this research is relatively recent and could be rounded out with an historical study of the publications. In this way, the evolution of each business model could be detected, to illustrate a process of searching for new ways to compete in the media market. This evolutionary perspective faces a methodological problem: many companies are reluctant to give information, especially of an economic-financial nature, at the risk of being imitated by their competitors.

In any case, our study detects some common models and guidelines that can serve as inspiration for companies seeking to offer public interest journalism to citizens in the way that **Olsen**, **Pickard** and **Westlund** (2020) recently outlined. Finally, from a policy-oriented perspective, the leading role of donations to support journalism may require some fiscal stimulus, like tax exemptions, as a way to foster sustainable models of quality journalism.

7. Notes

1. The chosen media brands were mentioned in the following market research and reports: the annual *Reuters Digital News Report*, *Nieman Lab*, *Media Sustainability Index*, and the works by **Schiffrin** *et al.* (2017), **Schiffrin** (2019), **Mioli** and **Nafría** (2018) and **Warner** and **Iastrebner** (2017).

For guidance on journalistic quality, we consulted *IREX* (2018), which provides ratings by country of the legal, political, and economic environment for quality journalism; Media Development Investment Fund (2018), which developed criteria for measuring quality journalism and sustainability, based on metrics of sales, reach, financial results, and civic impact; and NewsGuard, which has developed an online rating service that measures nine criteria of journalistic quality.

8. References

Abbé-Decarroux, François (1994). "The perception of quality and the demand for services. Empirical application to the performing arts". *Journal of economic behavior and organization*, v. 23, n. 1, pp. 99-107.
https://doi.org/10.1016/0167-2681(94)90100-7

Afuah, Allan; **Tucci, Christopher L.** (2001). *Internet business models and strategies: text and cases.* McGraw-Hill Irwin. ISBN: 978 0 071151238

Anderson, Chris (2006). *The long tail: Why the future of business is selling less of more*. New York: Hyperion. ISBN: 978 1 401309664

Arrese, Ángel (2016). "From gratis to paywalls. A brief history of a retro-innovation in the press's business". *Journalism studies*, v. 17, n. 8, pp. 1051-1067.
https://doi.org/10.1080/1461670X.2015.1027788

Bardoel, Jo (1996). "Beyond journalism: A profession between information society and civil society". *European journal of communication*, v. 11, n. 3, pp. 283-302.
https://doi.org/10.1177/0267323196011003001

Benson, Rodney (2019). "Paywalls and public knowledge: How can journalism provide quality news for everyone?". *Journalism*, v. 20, n. 1, pp. 146-149.
https://doi.org/10.1177/1464884918806733

Casero-Ripollés, Andreu; **Izquierdo-Castillo, Jessica** (2013). "Between decline and a new online business model: The case of the Spanish newspaper industry". *Journal of media business studies*, v. 10, n. 1, pp. 63-78.
https://doi.org/10.1080/16522354.2013.11073560

Cerezo, Pepe (2019). *Suscripciones, "the new black". Los modelos de pago emergentes.* Madrid: Evoca.
https://es.scribd.com/document/399188204/dosier-evoca-07-pdf

Cestino, Joaquín; **Berndt, Adele** (2017). "Institutional limits to service dominant logic and the servitisation in innovation efforts in newspapers". *Journal of media business studies*, v. 14, n. 3, pp. 188-216.
https://doi.org/10.1080/16522354.2018.1445163

Chesbrough, Henry W. (2010). "Business model innovation: opportunities and barriers". *Long range planning*, v. 43, n. 2-3, pp. 354-363.
https://doi.org/10.1016/j.lrp.2009.07.010

Chyi, Hsiang-Iris (2013). *Trial and error: U.S. newspapers' digital struggles toward inferiority*. Pamplona: Servicio de publicaciones. University of Navarra. ISBN: 978 84 80814447
https://dadun.unav.edu/bitstream/10171/42076/1/201610%20MMM%2014%20%282013%29.pdf

Chyi, Hsiang-Iris; **Ng, Yee-Man-Margaret** (2020). "Still unwilling to pay: An empirical analysis of 50 U.S. newspapers' digital subscription results". *Digital journalism*, v. 8, n. 4, pp. 526-547.
https://doi.org/10.1080/21670811.2020.1732831

Chyi, Hsiang-Iris; **Tenenboim, Ori** (2019). "What if the future is not all digital? Trends in U.S. newspapers' multiplatform readership". In: Eldridge, Scott; Franklin, Bob (eds.). *The Routledge handbook of developments in digital journalism studies*. Abingdon: Routledge, pp. 157-171. ISBN: 978 1 315270449

Cifras y Conceptos (2017). *Panel de opinión*.
http://cifrasyconceptos.com/productos-panel-de-opinion

Cook, Clare; **Sirkkunen, Esa** (2013). "What's in a niche? Exploring the business model of online journalism". *Journal of media business studies*, v. 10, n. 4, pp. 63-82.
https://doi.org/10.1080/16522354.2013.11073576

Cornia, Alessio; **Sehl, Annika**; **Nielsen, Rasmus-Kleis** (2019). "Comparing legacy media responses to the changing business of news: Cross-national similarities and differences across media types". *International communication gazette*, v. 81, n. 6-8, pp. 686-706.
https://doi.org/10.1177/1748048518808641

Costera-Meijer, Irene (2001). "The public quality of popular journalism: developing a normative framework". *Journalism studies*, v. 2, n. 2, pp. 189-205.
https://doi.org/10.1080/14616700120042079

Costera-Meijer, Irene (2012). "Valuable journalism: A search for quality from the vantage point of the user". *Journalism*, v. 14, n. 6, pp. 754-770.
https://doi.org/10.1177/1464884912455899

Deuze, Mark (2005). "What is journalism? Professional identity and ideology of journalists reconsidered". *Journalism*, v. 6, n. 4, pp. 442-464.
https://doi.org/10.1177/1464884905056815

Deuze, Mark; **Witschge, Tamara** (2018). "Beyond journalism: Theorizing the transformation of journalism". *Journalism*, v. 19, n. 2, pp. 165-181.
https://doi.org/10.1177/1464884916688550

Díaz-Noci, Javier (2019). "Cómo los medios afrontan la crisis: retos, fracasos y oportunidades de la fractura digital". *El profesional de la información*, v. 28, n. 6, e280625.
https://doi.org/10.3145/epi.2019.nov.25

Doyle, Gillian (2013). "Re-invention and survival: Newspapers in the era of digital multiplatform delivery". *Journal of media business studies*, v. 10, n. 4, pp. 1-20.
https://doi.org/10.1080/16522354.2013.11073569

Engelke, Katherine M. (2020). "Enriching the conversation: Audience perspectives on the deliberative nature and potential of user comments for news media". *Digital journalism,* v. 8, n. 4, pp. 447-466.
https://doi.org/10.1080/21670811.2019.1680567

Evens, Tom; **Raats, Tim**; **Von-Rimscha, M. Björn** (2017). "Business model innovation in news media organisations – 2018 special issue of the European Media Management Association (emma)". *Journal of media business studies*, v. 14, n. 4, pp. 167-172.
https://doi.org/10.1080/16522354.2018.1445164

Fila, Lukáš (2019a). "Letter to subscribers: Dennik N is experiencing the best time, the profit in 2018 was € 276,000". *Dennik N*, 1 February.
https://dennikn.sk/1368599/list-predplatitelom-dennik-n-zaziva-najlepsie-obobie-zisk-v-roku-2018-bol-276-tisic-eur/?ref=tema

Fila, Lukáš (2019b). "We have 35,000 subscribers, we unlock 35,000 articles". *Dennik N*, 28 March.
https://dennikn.sk/1422595/mame-35-tisic-predplatitelov-odomykame-35-tisic-clankov/?ref=tema

Foer, Franklin (2019). "Viktor Orbán's war on intellect". *The Atlantic*, June.
https://www.theatlantic.com/magazine/archive/2019/06/george-soros-viktor-orban-ceu/588070

Gebauer, Heiko; **Saul, Caroline**; **Halidmann, Mirella**; **Kramer, Sahsa** (2017). "When one business model is not enough for a social business". *Strategic direction*, v. 33, n. 1, pp. 10-12.
https://doi.org/10.1108/SD-06-2016-0096

Gelles, David (2018). "Billionaires can seem like saviors to media companies, but they come with risks". *The New York Times*, 19 September.
https://www.nytimes.com/2018/09/19/business/media/newspapers-billionaire-owners-magazines.html

Graves, Lucas (2016). *Deciding what's true: the rise of political fact-checking in American journalism*. New York: Columbia University Press. ISBN: 978 0 231175074

Grieco, Elisabeth (2018). "Newsroom employment dropped nearly a quarter in less than 10 years, with greatest decline at newspapers". *Pew Research Center. FactTank. News in the numbers*, April 20.
https://www.pewresearch.org/fact-tank/2018/07/30/newsroom-employment-dropped-nearly-a-quarter-in-less-than-10-years-with-greatest-decline-at-newspapers

Hamel, Gary (1996). "Strategy as revolution". *Harvard business review*, v. 7/8, pp. 69-82.
https://hbr.org/1996/07/strategy-as-revolution

Harlow, Summer; **Salaverría, Ramón** (2016). "Regenerating journalism. Exploring the 'alternativeness' and 'digital-ness' of online-native media in Latin America". *Digital journalism*, v. 4, n. 8, pp. 1001-1019.
https://doi.org/10.1080/21670811.2015.1135752

Holm, Anna B.; **Günzel, Franziska**; **Ulhøi**, **John P.** (2013). "Openness in innovation and business models: Lessons from the newspaper industry". *International journal of technology management*, v. 61, n. 3-4, pp. 324-348.
http://www.inderscience.com/offer.php?id=52674

IREX (2018). *Media sustainability index 2018: The development of sustainable independent media in Europe and Eurasia*.
https://www.irex.org/resource/media-sustainability-index-msi

Jenkins, Joy; **Nielsen, Rasmus-Klein** (2020). "Preservation and evolution: Local newspapers as ambidextrous organizations". *Journalism*, v. 21, n. 4, pp. 472-488.
https://doi.org/10.1177/1464884919886421

Kafka, Peter (2018). "TheSkimm is raising $12 million from *Google Ventures* and other investors to build its subscription business". *ReCode*, March 15.
https://www.vox.com/2018/3/15/17125870/skimm-google-ventures-funding-12-million-newsletter-millennial-women-subscribers-revenue

Karimi, Jahangir; **Walter, Zhiping** (2016). "Corporate entrepreneurship, disruptive business model innovation adoption, and its performance: The case of the newspaper industry". *Long range planning*, v. 49, n. 3, pp. 342-360.
https://doi.org/10.1016/j.lrp.2015.09.004

Kelly, Tara (2020). "Two months, a 30% price rise and 18,000 new paying readers: what eldiario.es did after Covid-19 struck". *European journalism centre*, May 28.
https://medium.com/we-are-the-european-journalism-centre/two-months-one-price-rise-and-28-000-new-paying-readers-89be4ccd2a1a

Konieczna, Magda (2018). *Journalism without profit*. New York: Oxford University Press. ISBN: 978 0 190641900

Lambeth, Edmund B.; **Thorson, Esther**; **Meyer, Philip** (eds.) (1998). *Assessing public journalism*. Columbia and London: University of Missouri Press. ISBN: 978 0 826211583

Magretta, Joan (2002). "Why business models matter". *Harvard business review*, May.
https://hbr.org/2002/05/why-business-models-matter

Márquez-Ramírez, Mireya; **Guerrero, Manuel-Alejandro** (2017). "Clientelism and media capture in Latin America". In: Schiffrin, Anya (ed.). *In the service of power: Media capture and the threat to democracy*. Washington: National Endowment for Democracy, pp. 43-58. ISBN: 978 0 9818254 2 7
https://www.cima.ned.org/wp-content/uploads/2017/08/CIMA_MediaCaptureBook_F1.pdf

Media Development Investment Fund (2018). *Investing for impact*.
https://www.mdif.org/impact

Mioli, Teresa; **Nafría, Ismael** (eds.) (2018). *Innovators in Latin American Journalism*. Austin, Texas: Open Society Foundations and Knight Center for Journalism in the Americas.
https://journalismcourses.org/ebook/innovators-in-latin-american-journalism

Mütterlein, Joschka; **Kunz, Reinhard E.** (2017). "Innovate alone or with others? Influence of entrepreneurial orientation and alliance orientation on media business model innovation". *Journal of media business studies*, v. 14, n. 3, pp. 173-187.
https://doi.org/10.1080/16522354.2018.1445162

Nafría, Ismael (2017). *La reinvención de The New York Times: Cómo la "dama gris" del periodismo se está adaptando (con éxito) a la era de los móviles.* Amazon Digital Services. ISBN: 978 1 544822792

Nel, François (2010). "Where else is the money? A study of innovation in online business models at newspapers in Britain's 66 cities". *Journalism practice*, v. 4, n. 3, pp. 360-372.
https://doi.org/10.1080/17512781003642964

Newman, Nic (2019). *Journalism, media, and technology trends and predictions 2019.* Oxford: Reuters Institute.
https://reutersinstitute.politics.ox.ac.uk/our-research/journalism-media-and-technology-trends-and-predictions-2019

Newsguard (s.f.).
https://www.newsguardtech.com/ratings/criteria-for-and-explanation-of-ratings

Nixon, Brice (2020). "The business of news in the attention economy: Audience labor and MediaNews Group's efforts to capitalize on news consumption". *Journalism*, v. 21, n. 4, pp. 73-94.
https://doi.org/10.1177/1464884917719145

Olsen, Ragnhild-Kristine; **Pickard, Victor**; **Westlund, Oscar** (2020). "Communal news work: Covid-19 calls for collective funding of journalism". *Digital journalism*, v. 8, n. 5, pp. 673-680.
https://doi.org/10.1080/21670811.2020.1763186

Olsen, Ragnhild-Kristine; **Solvoll, Mona-Kristine** (2018). "Reinventing the business model for local newspapers by building walls". *Journal of media business studies*, v. 15, n. 1. pp. 24-31.
https://doi.org/10.1080/16522354.2018.1445160

Osterwalder, Alexander; **Pigneur, Yves** (2010). *Business model generation: a handbook for visionaires, game changers, and challengers*. Hoboken, NJ: Wiley. ISBN: 978 0 470876411

Osterwalder, Alexander; **Pigneur, Yves**; **Tucci, Christopher L.** (2005). "Clarifying business models: Origins, present, and future of the concept". *Communications of the Association for Information Systems*, v. 16, n. 1.
https://doi.org/10.17705/1CAIS.01601

Pattabhiramaiah, Adithya; **Sriram, S.**; **Manchanda, Puneet** (2019). "Paywalls: Monetizing online content". *Journal of marketing*, v. 83, n. 2, pp. 19-36.
https://doi.org/10.1177/0022242918815163

Picard, Robert G. (2010). *Value creation and the future of news organizations. Why and how journalism must change to remain relevant in the twenty-first century*. Lisbon: Media XXI. ISBN: 978 989 8143 27 3

Picard, Robert G.; **Dal-Zotto, Cinzia** (2006). *Business models of newspaper publishing companies*. *IFRA Report*, May 2006.
http://www.robertpicard.net/PDFFiles/IFRAbusinessModels.pdf

Ramírez-de-la-Piscina, Txema; **Gorosarri, María**; **Aiestaran, Alazne**; **Zabalondo, Beatriz**; **Agirre, Antxoka** (2014). "Periodismo de calidad en tiempos de crisis: Un análisis de la evolución de la prensa europea de referencia (2001-2012)". *Revista latina de comunicación social*, n. 69, pp. 248-274.
https://doi.org/10.4185/RLCS-2014-1011

Rappa, Michael (2000). *Managing the digital enterprise*.
http://digitalenterprise.org/index.html

Reuters Institute (2016; 2017; 2018). *Digital news report*. Oxford: Reuters Institute for the Study of Journalism.
https://reutersinstitute.politics.ox.ac.uk/sites/default/files/research/files/Digital%2520News%2520Report%25202016.pdf

Salazar, Diego (2019). *No hemos entendido nada: Qué ocurre cuando dejamos el futuro de la prensa a merced de un algoritmo*. Barcelona: Debate. ISBN: 978 84 17636258

Schiffrin, Anya (ed.) (2019). *Fighting for survival: Media startups in the global South*. New York: Columbia University School of International and Political Affairs.
https://www.cima.ned.org/resource/fighting-for-survival

Schiffrin, Anya; **Santa-Wood, Beatrice**; **De-Martino, Susanna**; **Pope, Nicole**; **Hume, Ellen** (2017). *Bridging the gap: Rebuilding citizen trust in media open society foundation's program on independent journalism*.
https://drive.google.com/file/d/1VRIMmdmvsRp2r2q7ttexe3Ccn36hc3oz/view

Schmidt, Christine (2019). "Three years into nonprofit ownership, The Philadelphia Inquirer is still trying to chart its future". *Nieman Lab*, August 22.
https://www.niemanlab.org/2019/08/three-years-into-nonprofit-ownership-the-philadelphia-inquirer-is-still-trying-to-chart-its-future

Simon, Felix M.; **Graves, Lucas** (2019). *Pay models for online news in the U.S. and Europe: 2019 update*. Reuters Institute.
https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2019-05/Paymodels_for_Online_News_FINAL.pdf

Soloviev, Vladimir I.; **Kurochkin, Pavel A.**; **Rendiuk, Anton V.**; **Zazuk, Anton V.** (2010). "Innovative business models in the media industry". *Annales universitatis apulensis series oeconomica*, v. 12, n. 2.
https://doi.org/10.29302/oeconomica.2010.12.2.21

Soria-Martínez, Carlos (1993). "Algunas heterodoxias para mejorar la calidad de la información". *Communication and society*, v. 6, n. 1-2, pp. 49-58.
https://revistas.unav.edu/index.php/communication-and-society/article/view/35560

Teece, David J. (2010). "Business models, business strategy and innovation". *Long range planning*, v. 43, n. 2-3, pp. 172-194.
https://doi.org/10.1016/j.lrp.2009.07.003

Vara-Miguel, Alfonso (2016). "La marca como elemento diferenciador de los medios tradicionales y nativos digitales". In: Bel, Ignacio (coord.). *La prensa digital en España*. New York: Institute for Media and Entertainment, pp. 123-138.
https://www.researchgate.net/publication/312174125_La_marca_como_elemento_diferenciador_de_los_medios_tradicionales_y_nativos_digitales

Warner, Janine; **Iastrebner, Mijal** (2017). *Inflection point. Impact, threats, and sustainability: A study of Latin American digital media entrepreneurs*. Los Angeles: SembraMedia.
https://www.data.sembramedia.org

Zott, Christoph; **Amit, Raphael**; **Massa, Lorenzo** (2011). "The business model: Recent developments and future research". *Journal of management*, v. 37, n. 4, pp. 1019-1042.
https://doi.org/10.1177/0149206311406265

Zott, **Christoph**; **Amit, Raphael** (2010). "Business model design: An activity system perspective". *Long range planning*, v. 43, n. 2-3, pp. 216-226.
https://doi.org/10.1016/j.lrp.2009.07.004

Big data e inteligencia editorial en el *branded content* y en los nuevos modelos de negocio de los medios

Big data and editorial intelligence in branded content and the new media business models

Daniel Zomeño; Rocío Blay-Arráez

Cómo citar este artículo:

Zomeño, Daniel; **Blay-Arráez, Rocío** (2021). "*Big data* e inteligencia editorial en el *branded content* y en los nuevos modelos de negocio de los medios". *Profesional de la información*, v. 30, n. 1, e300120.

https://doi.org/10.3145/epi.2021.ene.20

Artículo recibido el 10-11-2020
Aceptación definitiva: 21-01-2021

Daniel Zomeño
https://orcid.org/0000-0003-0109-9578

Universitat Jaume I
Facultad de Ciencias Humanas y Sociales
Depto. de Ciencias de la Comunicación
Av. Vicente Sos Baynat, s/n.
12006 Castellón, España
zomeno@uji.es

Rocío Blay-Arráez ✉
https://orcid.org/0000-0003-4815-0588

Universitat Jaume I
Facultad de Ciencias Humanas y Sociales
Depto. de Ciencias de la Comunicación
Av. Vicente Sos Baynat, s/n.
12006 Castellón, España
rblay@uji.es

Resumen

Se estudia el uso que se hace de los datos en los departamentos de *branded content* de los medios de comunicación españoles. La inteligencia editorial generada por los creadores de contenido, junto a los departamentos de analítica y sus herramientas de monitorización y seguimiento de audiencias, son un fenómeno emergente que proporciona estrategias y productos editoriales de gran valor añadido para hacer frente a un contexto publicitario muy complejo. El trabajo de campo, de corte cualitativo, con entrevistas en profundidad a una muestra cualificada de responsables de *branded content* de los principales medios españoles, revisa la metodología empleada en la creación de productos editoriales como el *native advertising*. Los resultados corroboran la implicación de perfiles tecnológicos con conocimiento del ecosistema digital, así como de los departamentos de analítica que contribuyen a generar un profundo conocimiento de las audiencias y su comportamiento. Este hecho, está dando lugar a nuevos modelos de negocio fundamentales para la financiación de los medios. Esta investigación aporta conocimiento sobre los procesos de creación de contenido para las marcas por parte de las principales cabeceras de los medios tradicionales, los medios verticales y los nativos digitales. Las conclusiones podrán ser una referencia metodológica que ayude a mejorar los procesos.

Palabras clave

Medios de comunicación; Inteligencia editorial; *Branded content*; *Native advertising*; Segmentación de audiencias; Estrategias de publicación; *Big data*; Datos masivos; SEO; SEM; Medios sociales; Monitorización de contenido; *Dashboards*; KPIs.

Abstract

This article studies the use of data in the branded content departments of the Spanish media. The editorial intelligence generated by content creators, together with technology departments and their audience analysis and monitoring tools, compose an emerging phenomenon. These processes provide new business units with the opportunity to offer editorial brands various strategies and products with high added value to cope with a highly complex advertising context. The methodology used in creating editorial products such as native advertising is reviewed based on qualitative fieldwork using in-depth interviews and a qualified sample of branded content managers for the main Spanish media outlets. The results corroborate the involvement of technological roles with knowledge of the digital ecosystem, as well as the analysis departments, which contribute to generating in-depth knowledge of audiences and their behavior. This gives rise to new business models associated with data to finance the media. This research is important because it provides insight into the processes used to create content for brands via legacy media titles, vertical media, and digital natives. These conclusions could serve as a methodological reference that can contribute to improving these processes.

Keywords

Media; Editorial intelligence; Branded content; Native advertising; Audience segmentation; Publishing strategies; Big data; SEO; SEM; Social media; Content monitoring; Dashboards, KPIs.

Financiación

Este artículo se ha realizado con ayuda del proyecto UJIPR 00040 / UJI-B2018-27. *Medición de la reputación corporativa de Cruz Roja Española: Creación de un modelo para el tercer sector*, dirigido por Lorena López Font.

1. Aproximación documental

En el año 2000 ya Bauman advirtió de la necesidad de no menospreciar el profundo cambio que el advenimiento de la "modernidad fluida" estaba imponiendo a la condición humana y que exigía repensar los viejos conceptos que solían enmarcar su discurso narrativo (**Bauman**, 2000, p. 14). Bauman apuntaba hacia la estructura sistémica, remota e inalcanzable, del mismo modo que Castells habla de la sociedad en red y la estructura social construida alrededor de las redes digitales de comunicación (**Castells**, 2009, p. 24). La evolución tecnológica de los datos masivos (*big data*) es una de las áreas más importantes de la tecnología de la información que está avanzando a gran velocidad: todas las empresas deben mejorar sus capacidades para aprovechar los datos a fin de mantenerse competitivas (**Lee**, 2017, p. 293).

En estas dos últimas décadas, uno de los sectores empresariales con más influencia sobre la sociedad y que más ha experimentado este proceso de transformación y también de depreciación ha sido el de los medios de comunicación. La intrusión de internet y de las redes sociales cambió radicalmente el uso y consumo de la información; la aparición de los nuevos medios nativos digitales y las redes como canales de información alternativos coincidió con el cambio de modelo de negocio de los medios tradicionales (**Villafañe**; **Ortiz-de-Guinea-Ayala**; **Martín-Sáez**, 2020, p. 7).

Por tanto, los cambios tecnológicos han supuesto una transformación radical en el consumo de contenidos generales y de los modos de hacer de los medios con efectos directos en nuevos modelos de negocio, puesto que la sostenibilidad económica de estos, se ha visto comprometida. La potente combinación de redes y tecnologías digitales ha permitido a los ciudadanos expandir los contenidos periodísticos generados por los medios tradicionales o directamente crear nuevos relatos informativos (**Scolari**, 2013).

Los medios no pueden seguir con los flujos de comunicación unidireccionales de la era de los *mass media*, deben escuchar y aprender de sus audiencias si quieren disfrutar del éxito a largo plazo (**Jenkins**; **Ford**; **Green**, 2013, p. 24). La producción de contenidos, las rutinas de trabajo, los soportes y estrategias de distribución y los modelos de negocio están sufriendo importantes alteraciones (**Casero-Ripollés**, 2010, p. 600). Un proceso que trata de ofrecer un contenido cada vez más personalizado mientras las audiencias cada vez filtran y seleccionan más, sin que esté muy claro en función de qué criterios. A esto se suma la sobre oferta de información que llega a través de las redes sociales y que se añade a la de los medios (**Villafañe**; **Ortiz-de-Guinea-Ayala**; **Martín-Sáez**, 2020, p. 2).

Este cambio de paradigma también se está dando en la publicidad, que tiene que hacer frente a un consumidor más crítico, proactivo y profesionalizado en su relación con las marcas. La economía de la atención y la credibilidad se convierten en un bien escaso (**Castelló-Martínez**, 2018, p. 85). La captación ya no debe ser el objetivo sino la retención, la creación de relaciones perdurables con los usuarios (**Regueira-Mourente**, 2012, p. 66). Las marcas buscan ser útiles a estos y centrarse en crear conexiones emocionales. Los medios pagados han dejado de tener el protagonismo en los presupuestos publicitarios, en beneficio de los espacios que contribuyen a generar una experiencia real con la marca y aprovechan el potencial del *word-of-mouth* (WOM) para construir audiencias propias. La publicidad puede resultar intrusiva si no se tiene en cuenta que las audiencias son activas y sociales (**Papí-Gálvez**, 2015) y la clave radica en darle la forma adecuada. De ahí la importancia que está adquiriendo en estos tiempos el *branded content,* que es un contenido relevante, entretenido o interesante, de aspecto no publicitario. El contenido comunica de manera implícita los valores asociados a la marca, pero esta pasa a un segundo plano (*IAB*, 2019, pág. 8).

Nos encontramos ante un nuevo escenario, en el que la generación de contenido de calidad se ha convertido en una gran oportunidad comunicativa para las marcas, que llevan tiempo observando cómo la saturación publicitaria originada por planteamientos unidireccionales e intrusivos disminuye la eficacia de sus acciones. Frente a esta nueva realidad, se observa una estrecha colaboración entre los medios de comunicación y las marcas que han encontrado en el *branded content* una nueva apuesta para conectar con la audiencia (**Miotto**; **Payne**, 2019 p. 27-28). En los últimos años varios medios de comunicación han invertido muchos recursos en la creación de departamentos específicos de *branded content* dentro de las principales cabeceras. Las primeras fueron el *T-Brandstudio* de *The New York Times* o el *Guardian Labs* de *The Guardian* (**Blay-Arráez**; **Balado-Albiol**; **Zomeño**, 2018) y en España, aunque el fenómeno es más reciente, ya todos los grandes grupos de comunicación y las principales cabeceras disponen de departamentos que están experimentando hacia la creación de nuevos modelos de negocio. Especialmente notorio resulta la proliferación del *native advertising* que consiste en una acción pagada donde el contenido creado coincide con la forma y función del medio donde se aloja y es percibido como un contenido más (*Native Advertising Institute*, 2020). Este producto editorial es cada vez más valorado por las marcas que encuentran en él una respuesta efectiva a sus necesidades de relación con los públicos.

Hoy en día, para la publicidad no es una posibilidad obviar la medición, monitorización y análisis de los *social media* (**Martínez-Martínez**; **Lara-Navarra**, 2014 citado por **Papí-Gálvez**, 2015) y la gran capacidad de almacenaje de datos, su variedad y la velocidad lleva al fenómeno *big data*. En la toma de decisiones sobre la estrategia de medios a llevar a cabo, hay que transformar el dato en información y ésta, en conocimiento. En los medios se han extendido prácticas como, por ejemplo, el periodismo apoyado en grandes bases de datos, el uso de algoritmos para la edición de contenidos, o la experimentación con tecnologías digitales avanzadas (**Salaverría**, 2015).

Esta situación genera un ambiente mediático lleno de desafíos y muy competitivo, pero que a la vez da señales alentadoras del futuro del negocio informativo frente a la caída del negocio tradicional (**Newman**, 2020). Según el informe de Newman, no es fácil, pues la clave está en la combinación de valores editoriales y el duro realismo comercial, que permite desarrollar exitosamente, un periodismo digital propio y el negocio que lo sostiene. Una mayoría de los líderes digitales encuestados por este informe confía en que sus medios pueden atraer y retener el talento editorial que necesitan, pero se muestran más preocupados por su capacidad de atraerlo en áreas como la comercial, de producto, tecnología y datos. Y puesto que se prevé que también los medios de comunicación sufrirán el impacto de la siguiente ola de disrupción tecnológica, desde la automatización mediante inteligencia artificial, *big data* para reunir y analizar grandes volúmenes de datos y nuevas interfaces visuales y basadas en la voz, el foco puede estar en conservar las propuestas editoriales distintivas e integrar las áreas tecnológicas, los equipos de datos y la tecnología publicitaria.

De ahí el interés de este trabajo, donde el punto de mira es este entorno emergente del uso de los *big data* y la inteligencia editorial al servicio de los departamentos de *branded content* de las principales cabeceras españolas. El objetivo plantea alguno de los retos que Ramón Salaverría propone en su trabajo para renovar la investigación en medios digitales, tales como ayudar a entender cómo y por qué está sucediendo este proceso, así como cuáles son las alternativas posibles para el futuro a partir de sus resultados. El análisis que ofrece esta investigación se esfuerza en trasladar las propuestas prácticas desde la profesión a la industria periodística, dando cuenta de los conceptos que manejan y de los procesos que generan (**Salaverría**, 2015), partiendo de que los propios profesionales afirman desconocer cómo están trabajando los otros medios, pues no existe una trayectoria académica y profesional lo suficientemente amplia que haya generado unas sólidas referencias.

2. Objetivos y metodología

Esta investigación de corte cualitativo persigue generar conocimiento acerca del papel que juega el *data science* y la inteligencia editorial en los procesos de trabajo de los departamentos de *branded content* de las principales cabeceras españolas. Los objetivos que han guiado el trabajo son:

1. Describir la metodología seguida en los procesos de creación de *branded Content* y comprobar el nivel de involucración de los perfiles tecnológicos.

2. Determinar la retroalimentación de la gestión de los datos entre distintos departamentos de los medios de comunicación.

3. Conocer las nuevas vías de negocio surgidas en los medios de comunicación, a raíz de la incorporación de dicha tecnología a sus procesos.

Para obtener ese conocimiento holístico necesario en la investigación cualitativa planteada (**Soler**, 2011, p. 191) ha sido necesaria la obtención de conclusiones basadas en las opiniones de expertos (**Lafuente-Ibáñez**; **Marín-Egoscozábal**, 2008, p. 16). Para ello, ha sido fundamental la aproximación a la rutina profesional de los que dirigen los departamentos objeto de estudio, mediante entrevistas en profundidad realizadas *in situ* en el medio de comunicación.

La selección de la muestra de directores de departamentos de *branded content* de las principales cabeceras nacionales, parte del universo de estudio obtenido del *Ranking News* de *ComScore* en sus diferentes categorías, concretamente se ha trabajado con los datos de junio de 2019. Este ranking es una fuente de referencia entre los profesionales del sector pues mide las audiencias de los medios en diferentes plataformas digitales.

A partir de ahí, se determina la necesidad de entrevistar a expertos de cuatro tipos de medios de comunicación, para conocer distintos modelos de negocio, ya que cada uno de ellos tiene una experiencia y desarrollo tecnológico distinto. Para poder realizar una observación completa del fenómeno debemos sumar la experiencia de los diferentes medios según su categoría:

- Categoría *News/Information* (1): selección de los grupos de comunicación con las principales cabeceras de medios tradicionales.
- Categoría *News/Information* (2): selección de medios nativos digitales.
- Categoría *Contenidos nicho*: selección de medios verticales de áreas de consumo concretas.
- Categoría *Medios millennial*: selección de medios dirigidos al público *millennial* y con las *RRSS* como canal principal.

Con estas premisas, la muestra resultante es de conveniencia (**Gaitán-Moya**; **Piñuel-Raigada**, 1998, p. 90), partiendo de la base de la dificultad que entraña entrevistar personalmente a los directivos de estas organizaciones. Los medios de comunicación representados se encuentran en los primeros puestos de las distintas categorías del ranking *Comscore 2019*. Los entrevistados han sido 16 directivos que representan a 15 grupos o medios de comunicación en las distintas

	Media	Total Unique Visitors/Viewers (000)			% Reach		
		Total Digital Population	Desktop	Mobile	Total Digital Population	Desktop	Mobile
	Total Internet : Total Audience	33,777	22,236	30,641	100.0	100.0	100.0
	News/Information	33,243	21,784	30,396	98.4	98.0	99.2
1	Vocento	25,809	6,671	23,922	76.4	30.0	78.1
2	Prisa	25,768	7,733	23,500	76.3	34.8	76.7
3	RCS MediaGroup - Unidad Editorial	25,360	7,072	22,953	75.1	31.8	74.9
4	Prensa Ibérica	24,922	5,612	23,127	73.8	25.2	75.5
5	Grupo Godo	23,719	4,440	22,096	70.2	20.0	72.1
6	Henneo	20,732	3,298	19,044	61.4	14.8	62.2
7	ELCONFIDENCIAL.COM	15,611	2,852	13,839	46.2	12.8	45.2
8	ElEspañol Sites	15,133	2,430	13,592	44.8	10.9	44.4
9	OKDIARIO.COM	10,775	1,151	9,936	31.9	5.2	32.4
10	Grupo Planeta Sites	10,681	1,921	9,319	31.6	8.6	30.4
11	Eldiario.es Sites	10,045	1,674	8,834	29.7	7.5	28.8
12	Microsoft News	9,591	8,863	2,202	28.4	39.9	7.2
13	ElEconomista	9,477	2,519	7,679	28.1	11.3	25.1
14	Yahoo-HuffPost News Network	9,380	1,510	8,308	27.8	6.8	27.1
15	La Voz De Galicia	7,940	909	7,217	23.5	4.1	23.6
16	Xataka	7,627	2,263	5,948	22.6	10.2	19.4
17	PUBLICO.ES Sites	7,349	993	6,572	21.8	4.5	21.4
18	Periodista Digital Sites	7,298	373	6,982	21.6	1.7	22.8
19	Agencia Europa Press	6,706	1,291	5,714	19.9	5.8	18.6
20	Pelmorex Corp.	6,372	1,557	5,184	18.9	7.0	16.9
21	Grupo ADSLZone	6,370	2,120	4,750	18.9	9.5	15.5
22	Libertad Digital	6,272	743	5,676	18.6	3.3	18.5
23	ESdiario Sites	5,539	142	5,397	16.4	0.6	17.6
24	AccuWeather Sites	5,370	230	5,165	15.9	1.0	16.9
25	Upday (Mobile App)	4,570	N/A	4,570	13.5	N/A	14.9
26	Vozpopuli.com Sites	4,423	416	4,065	13.1	1.9	13.3
27	Weather Company, The	4,420	42	4,379	13.1	0.2	14.3
28	Grupo El Comercio	4,310	603	3,809	12.8	2.7	12.4
29	Elnacional.cat Sites	4,121	374	3,798	12.2	1.7	12.4
30	BBC Sites	4,035	895	3,313	11.9	4.0	10.8

Figura 1. *Ranking news comScore top 30 news*, junio 2019. Fuente de referencia para establecer el universo de estudio.

categorías seleccionadas. Todos ellos, sujetos informados que poseen un conocimiento acerca del referente investigado (**Gaitán-Moya**; **Piñuel-Raigada**, 1998 p. 90) pues tienen una participación en el proceso estudiado.

Estas entrevistas, se realizaron entre el 20 de noviembre de 2019 y el 10 de julio de 2020, doce fueron presenciales, teniendo la oportunidad de visitar los departamentos de *branded content*, con una duración media de 120 minutos. Tan sólo tres tuvieron que realizarse online puesto que sobrevino la pandemia y el confinamiento. La entrevista en profundidad ha seguido un guión estructurado con unas pautas concretas de formulación de preguntas (**Vilches**, 2011 pp. 216-219) en base a los objetivos planteados por la investigación.

Las cuestiones planteadas en la entrevista en profundidad se han articulado en base a cuatro bloques temáticos donde se ha guiado la entrevista desde lo más general, como son las características de los departamentos de *branded content,* hasta cuestiones más específicas sobre los perfiles, procesos de trabajo y el producto elaborado para finalizar con los pronósticos de futuro, a modo de prospección. El hecho de llevar a cabo la entrevista en el propio medio, en el entorno laboral donde tiene lugar la actividad, ha hecho que se puedan también realizar listas de comprobación previamente preparadas.

La entrevista ha contado con preguntas abiertas, pues es lo más recomendable cuando se indaga sobre las razones, motivos o causas que llevan a sostener determinadas decisiones; y alguna cerrada donde se proponía un listado de opciones previamente preparado (**Vilches**, 2011 pp. 216-219), lo que ha permitido indagar tanto en lo que han contado como en lo que hacen. Los resultados se han analizado planteando un análisis horizontal, ya que el interés reside en el conjunto de respuestas a cada una de las preguntas por parte de la muestra de investigación (**Gaitán-Moya**; **Piñuel-Raigada**, 1998 pp. 109) y tan sólo cuando las diferencias han sido sustanciales se especifica la categoría de medios donde se produce o no cierto fenómeno. No obstante, en la exposición de resultados se presentarán algunas citas textuales de las entrevistas por su capacidad de ilustrar ideas.

Las conclusiones, según la afirmación de muchos de los entrevistados, despiertan gran interés entre los participantes del trabajo de campo, pues la creación reciente de estos departamentos hace que no se tengan referencias previas lo suficientemente sólidas.

Se trata de un planteamiento metodológico que cumple con tres requisitos fundamentales (**Álvarez-Gayou-Jurgenson**, 2003, pp. 32-33):

- validez, por estar enfocado a conseguir la información capaz de explicar esa realidad;
- confiabilidad, por la suma de las distintas perspectivas sobre un mismo tema;
- muestra, que cumple el criterio de representatividad cualitativa; la representatividad de esta muestra no viene definida por el tamaño ni la representatividad estadística (**Wimmer**; **Dominick**, 1996, p. 67).

Finalmente se abre una discusión en el epígrafe de conclusiones, en el que se confrontan los resultados que ayudarán a plantear la reflexión crítica con implicaciones prácticas para el objeto de estudio. Además de plantear los retos a los que se enfrentan los medios de comunicación ante las crecientes exigencias provocadas por los cambios sociales y tecnológicos, identificando las claves que deberán trabajar a futuro, donde la viabilidad económica y las fuentes de financiación son fundamentales.

3. Resultados

El trabajo de campo ha podido constatar cómo la presencia de los departamentos de carácter tecnológico como el de analítica, SEO o *social media* es constante en el proceso de creación de productos editoriales patrocinados por las marcas, especialmente en lo que se refiere a las campañas de *native advertising*.

Figura 2. Muestra de directivos y grupos/medios de comunicación entrevistados.

Se ha detectado además que en los distintos departamentos de *branded content*, independientemente de la clasificación del medio, se reproduce un patrón parecido en cuanto a los procesos y metodología de trabajo, pudiendo establecer tres fases:

- recepción del encargo con fase de consultoría estratégica y definición de objetivos que se concreta en una propuesta creativa;
- activación de la campaña con monitorización en tiempo real y posible rediseño de contenidos para su optimización;
- elaboración de informes de resultados para la medición del retorno y extracción de aprendizajes para futuras propuestas por parte del departamento de marketing y *branded content*.

3.1. Fase I. Analítica, SEO y *social media* en la fase estratégica de la propuesta creativa

3.1.1. Análisis de audiencias y búsqueda de *insights*

La incorporación de perfiles tecnológicos ha dotado a las unidades de negocio de los medios, de una inteligencia propia de los especialistas en marketing. Éstos adquieren conocimientos y funciones de *planner* estratégico, que junto a los departamentos de analítica trabajan sobre las audiencias y los comportamientos de los usuarios, definiendo estrategias que ayuden a los responsables de *branded content* en su propuesta creativa.

Uno de los grandes argumentos de venta expuestos por los departamentos de desarrollo de negocio consiste no sólo en las grandes audiencias que atesoran sino en el profundo conocimiento que tienen de ellas, como nos explica Alejandro Teodoro (*Grupo Godó*):

> "Somos nosotros quienes sabemos qué busca nuestra audiencia, cuáles son los formatos, cuál es la tipología de noticias, cuáles son los territorios que mejor funcionan, cómo trabaja el SEO. Todo esto es un *know how* que está dentro de nuestra casa" (entrevista 10/07/2020).

Y esto se produce gracias al análisis constante de todas las interacciones entre los contenidos y los usuarios a través de los distintos canales y cabeceras, como reconoce Marta Gesto cuando afirma que en *Vocento* hay un departamento de audiencias que es transversal y que hace un constante análisis de públicos.

> La incorporación de perfiles tecnológicos ha dotado a las unidades de negocio de los medios, de una inteligencia propia de los especialistas en marketing

Este proceso de investigación resulta especialmente efectivo en el caso de los medios que disponen de una red global y que les permite acceder a una inteligencia editorial elaborada desde distintos contextos, proporcionándoles valiosos *insights* para el proceso creativo como nos descubre Jorge Madrid (*Condé Nast*):

> "Estos *insights* se nutren de informes que genera nuestro departamento internacional de investigación en *Condé Nast* y también de cualquier dato que generan nuestras audiencias. Es decir, el departamento de marketing tiene un área donde se da soporte constante a los equipos editoriales para que entiendan mejor a las audiencias. Lo que funciona y lo que no. Qué intereses tienen y sobre todo para adelantarse a esos comportamientos" (entrevista 9/07/2020).

En un momento en el que cuesta tanto fidelizar al usuario de un ecosistema digital profundamente atomizado, resulta esencial para el proceso de generación de contenido poder disponer de un conocimiento de las audiencias, mediante el análisis de datos.

3.1.2. Estrategias de *Search*

Uno de los elementos más disruptivos que se dieron tanto en el sector publicitario como en el ámbito del periodismo a raíz de la revolución digital, fue sin duda la enorme relevancia que pasaron a tener plataformas tecnológicas como *Google*. Y según parece, esta dependencia de las marcas y los medios al gigante tecnológico sigue estando vigente, como nos comenta Alex Ferrero (*Webedia*):

> "*Google* sigue siendo el árbitro. Es una especie de justicia ciega, es el Dios loco que está ahí con la melodía y hoy te manda 100 mil páginas, mañana te corta el grifo y te cambia el algoritmo" (entrevista 20/11/2019).

Se puede constatar que los departamentos responsables de las estrategias de *search* como son SEO y SEM se han convertido en piezas clave dentro de los medios dando cobertura tanto a la parte editorial como a la de marketing y *branded content*. Alejandro Teodoro (*Grupo Godó*), hace la siguiente observación:

> "¿Qué es lo que han hecho los medios y los grupos de comunicación? Reforzar al máximo las estructuras con equipos de SEO muy potentes para ser capaces de trabajar día a día aquellos contenidos, no sólo los que surgen de la propia actualidad, sino los temas que en todos los medios somos conscientes que generan audiencia, por lo tanto, los que nacen de una búsqueda de *Google*" (entrevista 10/07/2020).

En toda propuesta del equipo de *branded content* se acude al departamento de SEO, como nos cuentan las responsables en *Unión Editorial*, Silvia González y Aurora Yáñez:

> "Vamos a las cabeceras y hablamos con el director de SEO para comentarle que lanzaremos un proyecto y que lo vamos a trabajar con ellos para ver cómo optimizamos, porque en todos nuestros proyectos los objetivos de KPIs se alcanzan de forma orgánica" (entrevista 17/12/2019).

A parte de asesorar al equipo encargado de generar los contenidos en cuestiones como la optimización y la definición de palabras clave, se pueden dar encargos donde el cliente viene buscando estrategias de SEO más sofisticadas como el *link building.* Aquí la autoridad del dominio de las grandes cabeceras se convierte en el principal activo, como expone Atala Martín (*Prensa Ibérica*), cuando afirma que te dan su reputación, algo muy importante, porque ellos son diecisiete periódicos apuntando a una marca.

3.1.3. Estrategias en la distribución del contenido.

A la importancia y dificultad de conocer en profundidad el entorno *Google* por parte de los medios, hay que sumar la enorme complejidad que envuelve a las redes sociales. Y es que estas, con su diversidad de canales, formatos y regulaciones, requieren de auténticos especialistas que puedan ayudar al departamento de *branded content* a tomar las decisiones adecuadas, como indica Davit Miró (*Playground magazine*):

> "Otro perfil que también participa en el proceso es el *audience strategist* que ayudará a sacarle el máximo partido al contenido en todas las plataformas. Distribuye el contenido y hace que se adapte a las reglas, a las normas de esas plataformas y trabaja una estrategia de tráfico hacia las piezas" (entrevista 13/10/2019).

Por lo que las figuras dedicadas a la distribución del contenido son de vital importancia ya que como cuenta Jorge Madrid (*Condé Nast*), cuando crean una campaña les están contratando para ofrecerles una buena idea a las marcas y una buena estrategia de distribución, que está asociada al *social media* en la mayoría de los casos.

El conocimiento de los medios sociales que tienen los medios nativos digitales es especialmente significativo, sobre todo en los que se dirigen a un público *millennial*, haciendo que las marcas en muchos casos se hayan puesto en sus manos para llevar a cabo estrategias de contenido.

Las marcas buscan ese conocimiento tan profundo que tienen de las plataformas de distribución y de las audiencias actuales, a través de la prueba y error y el A/B *testing*. Es según Davit Miró (*Playground magazine*), una experiencia que tienen con su medio que les da un valor diferencial.

Una de las estrategias que se suele demandar por parte de las marcas es la búsqueda de una segmentación de la audiencia, en base a patrones de navegación que ayudan a generar un impacto mucho más preciso, para lo que es importante contar con la parte de analítica como explica la responsable en *Prensa Ibérica*, Atala Martín:

> "Lo hemos hecho con algún cliente que lo ha pedido en concreto y hemos trabajado con el equipo de *data*, hacemos algunos paneles de navegación para centrar la audiencia con algunos proyectos en especial" (entrevista 22/11/2019).

3.1.4. Definición de objetivos

En el momento que el departamento comercial recibe el encargo por parte de la marca, la definición de objetivos resulta fundamental y se procede a establecer indicadores en forma de KPIs como nos comenta Jorge Madrid (*Condé Nast*):

> "El cien por cien de nuestras campañas tienen unos KPIs muy elaborados. Cuando digo el cien por cien, es el cien por cien. Tanto las campañas *one shot* más tácticas como las campañas de continuidad, todas tienen sus propios KPIs" (entrevista 9/07/2020).

Es habitual encontrarse con clientes que tienen muy claro la importancia de las métricas y vienen con unos KPIs muy bien definidos, como nos explica Davit Miro (*Playground magazine*):

> "Las marcas quieren una estrategia de contenidos y tienen muy claro que quieren incrementar la comunidad, que quieren KPIs cualitativos, que quieren retención, que quieren visualizaciones, interacciones, *reach engagement*, vienen con un nivel de especialización grande" (entrevista 13/10/2019).

Para que posteriormente se pueda hacer una propuesta que responda a las necesidades del cliente, el conocimiento del ecosistema del dato resulta esencial, como nos comenta Ana Multigner (*Hearst*):

> "Contar con todo el análisis es clave, ya que la definición de KPIs es fundamental para desarrollar un formato u otro. Tener muy medido cuánto alcance podemos conseguir de media y tenerlo todo monitorizado para que lo que se ofrezca al cliente se acerque lo más posible a lo que podemos conseguir" (entrevista 18/12/2019).

3.2. Fase II. Ejecución y monitorización del contenido para su optimización

Una vez se ha llevado a cabo una primera fase de consultoría estratégica que ha dado lugar a una propuesta creativa de *branded content* se procede a su ejecución y posterior publicación según lo establecido en la estrategia de distribución.

En esta segunda fase la incorporación de la tecnología se materializa a través de aplicaciones que podemos encontrar en la mayoría de los departamentos de analítica de los medios de comunicación como nos explica Marta Gesto (*Vocento*):

> "Tenemos *chartbeat*, una herramienta que te monitoriza en tiempo real el mapa de calor de la portada. Entonces, nosotros sabemos en ese momento, si nuestro módulo está en consonancia con los módulos de alrededor" (entrevista 21/11/2019).

Una vez más los especialistas en analítica son los encargados de llevar a cabo la monitorización del contenido para comprobar que se está cumpliendo con los KPIs acordados, como cuenta la directora de *branded content* de *¡Hola!*, Gema Jiménez Peral. Ella explica cómo el equipo de tráfico está todo el rato midiendo las acciones y les avisan si las piezas no están alcanzando los indicadores marcados.

Figura 3. Acción de *branded content* de *El confidencial* y *Vanitatis* para *Tous*.

Una vez se detecta que algún contenido no está funcionando se pone en conocimiento del jefe de proyecto para que lleve a cabo las acciones que considere oportunas, una práctica habitual y muy extendida consiste en cambiar el titular o la imagen, ya que estos dos elementos son los que tienen más peso a la hora de mejorar los resultados.

> Se trata de tomar las decisiones necesarias en el menor tiempo posible, con el menor coste posible para que un contenido alcance las métricas pactadas con un cliente

A partir de la revisión de las entrevistas llevadas a cabo se ha podido establecer una serie de acciones destinadas a optimizar la campaña, que llevan a cabo estos departamentos, con el fin de cumplir con los objetivos marcados:

- cambio de titular;
- cambio de imagen;
- mejorar ubicación en la *home*;
- amplificación a través de las redes;
- apoyar con una campaña de *paid*;
- publicación en otras plataformas como *Outbrain*.

Se trata de tomar las decisiones necesarias en el menor tiempo posible y con el menor coste posible, para que un contenido alcance las métricas pactadas con el cliente.

En proyectos de *branded content* a medio o largo plazo se llevan a cabo otras acciones donde la monitorización se extiende en el tiempo como cuenta Marta Gesto (*Vocento*):

> "Cuando hacemos un proyecto de *branded content*, el día que lo montamos tenemos varios contenidos ya preparados. Lanzamos el primero, la semana siguiente lanzamos el segundo, la semana siguiente el tercero y empezamos a analizar. Y eso nos permite saber si la planificación que tenemos hasta el final del proyecto está bien hecha o hay que afinarla porque no está funcionando. A veces es el formato, a veces es el lenguaje, y a veces es el tema o el aterrizaje, esas conclusiones se extraen monitorizando cada segundo" (entrevista 21/11/2019).

En esta segunda fase se observa cómo las tecnologías más avanzadas en análisis *real time* como *Chartbeat*, *Google Analytics* o *Adobe Analytics* resultan esenciales para monitorizar los contenidos y que el departamento pueda tomar las decisiones oportunas, como advierte Jorge Madrid (*Grupo Condé Nast*):

> "El *data* está al servicio de la creatividad en la parte de creación del contenido y luego también en la parte de la distribución. Yo tengo que estar utilizando cada uno de esos contenidos teniendo en cuenta la inteligencia editorial, lo que me están diciendo los datos, cómo están reaccionando los usuarios" (entrevista 9/07/2020).

3.3. Fase III. Medición del retorno y aprendizajes

Una vez se da por concluida la campaña, se inicia una fase de recopilación de datos que el equipo de analítica traduce en informes elaborados para reportar los resultados obtenidos. Y es que uno de los factores clave que ha traído la transformación digital es la posibilidad de medición con unos niveles de precisión impensables hasta la fecha. Para los departa-

Figura 4. Captura del cuadro de mando de *Chartbeat*.

mentos de marketing de las marcas este aporte resulta ya indispensable en la contratación de cualquier acción que se dé en un entorno digital. Los anunciantes piden un análisis y una trazabilidad como si fuese publicidad, afirma Marta Gesto (*Vocento*) y cada vez más los clientes quieren números, quieren KPIs para poder justificar la inversión, advierte Alberto Guzmán (*El confidencial*).

> Una de las principales funciones del análisis de métricas consiste en la extracción de *learnings* que ayuden a los departamentos a tomar las decisiones adecuadas en futuras campañas

En algunos casos, los propios clientes tienen un conocimiento y manejo del análisis de datos muy alto, como es el caso de *La liga*, mencionada en varias ocasiones por varios entrevistados puesto que dispone de un departamento propio de *big data* y acude a los medios para elaborar estrategias de contenido muy elaboradas que requieren de propuestas y mediciones exigentes.

Pero en muchos casos, son los propios medios los que tienen que adoptar un papel más pedagógico para mostrar la verdadera eficacia del *branded content* en las campañas que se están llevando a cabo y de esta forma, reforzar la figura de consultor que busca relaciones a largo plazo con las marcas. Esto queda patente en las palabras de Alejandro Teodoro (*Grupo Godó*), cuando insiste en que los grupos de comunicación tienen un reto, que consiste en ser capaces de ayudar a las marcas a entender si un contenido está o no funcionando.

Este proceso de análisis de datos puede ser utilizado también por parte del equipo creativo para reivindicar su experiencia en la creación de contenido y mejorar procesos en el futuro como nos indica Davit Miró (*PlayGround magazine*):

> "Con los clientes de la agencia intentamos hacer cierres mensuales de cara al siguiente proyecto, y esto nos da pie a ver qué se ha hecho bien y qué se ha hecho mal, también nos sirve para explicarle al cliente lo que ha hecho mal él, como cuando nos fuerza a lanzar un mensaje que genera el rechazo de la audiencia. Es una demostración empírica" (entrevista 13/10/2019).

3.3.1. Extracción de aprendizajes a partir del análisis de datos

Más allá de reportar los resultados y el cumplimiento de objetivos al cliente, una de las principales funciones del análisis de métricas consiste en la extracción de aprendizajes que ayuden a los departamentos a tomar las decisiones adecuadas en futuras campañas, como cuenta Davit Miró (*PlayGround Magazine*):

> "Hay informes periódicos elaborados desde el departamento de analítica, pero dejando constancia a los creativos. Además hacemos reuniones semanales donde hacemos seguimiento de los principales KPIs de los proyectos y miramos cómo mejorar" (entrevista 13/10/2019).

En otros casos los datos ayudan a los equipos a detectar tendencias en el compartimiento de las audiencias, como explica Marta Gesto (*Vocento*):

> "En el momento en que te das cuenta de que el ratio de páginas vistas sube, de que el tiempo de permanencia en página aumenta, tú te das cuenta que hay un interés ahí" (entrevista 21/11/2019).

Estos aprendizajes no sólo nacen de las métricas generadas por las campañas de *branded content* sino que también proceden de la parte editorial y de las métricas de sus contenidos, estas ayudan a tener una inteligencia editorial más precisa como expone Ana Multigner (*Hearst*):

> "tenemos informes automatizados de *Google Analytics*, la persona responsable de *data* genera informes que se trasladan automáticamente a todas las personas, con lo cual se decide cuáles son los contenidos editoriales y secciones que mejor han funcionado, esos *inputs* los tenemos" (entrevista 18/12/2019).

3.3.2. Desarrollo de métricas propias

Las aplicaciones dedicadas al análisis de datos suelen ser fruto del trabajo de terceros, como las plataformas tecnológicas o programadores de software, con herramientas muy especializadas como la que nos menciona Marta Gesto (*Vocento*):

> "Nosotros utilizamos muchísimo una herramienta de cualificación de audiencias que se llama *Qualifio* y que te permite recoger datos a través de contenidos interactivos, las marcas muchas veces no dan crédito a la cantidad de usuarios que participan" (entrevista 21/11/2019).

En algunos casos, se diseñan aplicaciones propias para complementar y enriquecer los datos recopilados con métricas mucho más ajustadas, como es el caso de *Hearst* que recurre a una métrica propia utilizada en toda la red internacional y que está muy enfocada al *engagement. Duel Time* consiste en obtener el porcentaje de cuántos usuarios han llegado al setenta y cinco por ciento de lectura. En el caso de *Condé Nast*, Jorge Madrid nos explica que:

> "se dispone de una comunidad internacional muy fidelizada, conocida como *Vogue Voices y GQ community*; es una base de datos de usuarios vinculados a nuestra marca que han mostrado su interés en participar en nuestro panel y con los que podemos interactuar" (entrevista 9/07/2020).

En esta última fase, también resulta crucial disponer de todo el conocimiento aportado por los departamentos de analítica, teniendo en cuenta que es un momento en el que se gestionan grandes cantidades de datos y se cruzan métricas provenientes de distintos departamentos o cabeceras que dan lugar a unos cuadros de mando muy complejos. Los de-

Figura 5. Síntesis del proceso del *branded content.*

partamentos de analítica hacen una tarea de interpretación para extraer los datos cualitativos y los plasman en informes inteligibles para el resto de los equipos. Estos avances de conclusiones resultan esenciales en el proceso de aprendizaje de los departamentos con el fin de ofrecer a las marcas un producto cada vez más efectivo.

Se puede constatar cómo en todas las fases existe una involucración permanente de los perfiles más tecnológicos que asisten con la ciencia de los datos a los distintos responsables de la creación de las campañas. Observamos, además, una especie de flujo entre las distintas fases donde se da un trasvase de conocimiento que se va alimentando permanentemente. Estos procesos dan lugar a lo que se conoce como inteligencia editorial, según los entrevistados, y permite a los medios llevar a cabo propuestas y estrategias de contenido cada vez más precisas.

3.4. Nuevos modelos de negocio derivados del *big data*

La transformación digital llevada a cabo por los medios en los últimos quince años ha llevado a incorporar una serie de perfiles y herramientas dirigidas a consolidar el *data science.* Esto se está traduciendo entre otras cosas, en nuevas vías de ingresos cada vez más importantes para los medios de comunicación.

La gran cantidad de información que se extrae constantemente de las audiencias y el conocimiento de los usuarios se ha convertido en un gran activo de los medios. Los clientes buscan unas estrategias de *performance* cada vez más sofisticadas, donde el contenido pasa a formar parte de su embudo de conversión, como nos explica Alejandro Teodoro (*Grupo Godó*):

> "ofrecemos impactar no de manera cuantitativa, sino cualitativa. Trabajamos la parte de *market research,* es decir, una vez finalizada una acción de *branded content* te proporcionamos información de los usuarios que han consumido esa información. Hacemos un panel, un estudio de mercado. Toda esa información o valor añadido es la que nos permite, en un mercado cada vez más competitivo entre los grupos de comunicación, ser capaces de diferenciarnos de la competencia y cerrar un proyecto" (entrevista 10/07/2020).

En otros casos las propuestas ni siquiera implican la creación de contenido como nos aclara Ángel Fernández, director de *Jot Down*, al afirmar que algunos medios están ganando mucho dinero con las marcas a través de una técnica llamada *crossed DMA* y que consiste en la segmentación de tu audiencia mediante un *script*.

"La gran cantidad de información que se extrae constantemente de las audiencias y el conocimiento de los usuarios se ha convertido en un gran activo de los medios"

Además de colaborar con las marcas para este tipo de acciones concretas, se están dando propuestas mucho más ambiciosas, como es el caso de dos de los grandes grupos mediáticos de España y que están comercializando los datos a través de sus unidades de negocio como nos cuenta Leyre Rodríguez (*Prisa*):

> "Con el equipo de análisis de datos empezamos a vender proyectos de *branded content* que incluyen un proyecto de *big data*, o bien porque recogemos datos con los que luego impactamos o porque los compartimos" (entrevista 10/12/2019).

O en *Unidad Editorial*, como nos describen Silvia González y Aurora Yáñez:

> "Estamos trabajando con los datos, recogemos esas *cookies* y podemos volver a impactar. Eso también lo comercializamos, es un paquete aparte. Nuestro departamento de análisis de datos además te puede hacer un estudio estupendo y esto te lo aporta *Unidad Editorial*" (entrevista 17/12/2019).

En otros grandes grupos mediáticos de este país, se establecen interesantes sinergias en torno a la recopilación y comercialización de los datos, como es el caso de *Vocento*, *Grupo Godó* y *Grupo Prisa*, que están aunando fuerzas con la creación de una plataforma de comercialización de audiencias de calidad para la publicidad programática, conocida como *WeMass*.

Y es que parece que son varias las oportunidades que se están abriendo alrededor de los medios y su gran capacidad para generar *big data*. Para Ana Multigner (*Hearst*):

> "Los *big data* han llegado y todo el mundo quiere productos basados en los datos. Vendemos *cookies* de terceros, lo que llamamos a través de DMPs *(data management platforms*) segmentación interesante, son *clusters de cookies* muy cualificadas y se está pidiendo mucho. Pero con el cambio regulatorio en Europa, el engrosamiento del volumen de *cookies* cruzado con terceros va a desaparecer, por lo que las agencias conocidas como *third party data* no van a poder seguir ofreciendo este servicio. Con lo cual, ahí los medios sí que tenemos un hueco porque nosotros vamos a tener el *first party data* que yo obtengo, que puedo segmentar, que puedo activar y que te puedo ofrecer. Yo veo la tendencia clara en un futuro, y es trabajar con *membership*, lo que llamo la estrategia de *identity project* y que desde *Hearst* estamos apostando fuerte. A nivel estratégico digital significa para los medios convertirnos en lo que ahora mismo sólo ofrece *Facebook*. Yo tengo a esta audiencia, pero la tengo además con nombre y apellidos, dónde vive, sus *hobbies*, etc. Pasamos de tener *cookies* a convertirlas en personas que además pueden ser activables a través de un *branded content* exclusivo o a través de *newsletter.* Esa es la estrategia a la que vamos. Con lo cual el *first party data* es una oportunidad que no es puro *branded content* pero sí es una fuerza publicitaria, poder impactar a esas *cookies* de una manera concreta" (entrevista 18/12/2019).

4. Discusión y conclusiones

La situación actual en los medios españoles es fruto de la revolución vivida en la última década y media, con procesos de digitalización y adaptación a un ecosistema comunicativo muy complejo. Esto les permite contar con un alto grado de tecnificación y sofisticación en la gestión de los datos, que les coloca en una posición de ventaja frente a otros sectores y pronostica un futuro que, aunque incierto, invita al optimismo. Fruto de ese cambio se han abierto nuevos escenarios donde los medios invierten muchos esfuerzos por encontrar fórmulas de monetización y elaboración de nuevos modelos de negocio que garanticen su sostenibilidad.

El refinado conocimiento de las audiencias y de su comportamiento, así como la elaboración de mejores estrategias digitales para la óptima distribución del contenido nacen, en gran parte, del trabajo que vienen realizando los nuevos perfiles tecnológicos y sus poderosas herramientas de análisis. La aportación tecnológica en el ámbito de la analítica ha sido uno de los motores de transformación de varios departamentos, con especial incidencia en los perfiles comerciales, que han tenido que evolucionar hacia la figura del consultor estratégico debido a que la situación actual hace que las marcas requieran de nuevas propuestas mucho más sofisticadas como el *native advertising.*

La transformación acaecida en los departamentos comerciales de los medios ha hecho que se pase de vender espacios publicitarios y algunas acciones especiales de naturaleza redaccional, a la comercialización de nuevos productos que demandan una evolución como nos comenta Jorge Madrid (*Grupo Condé Nast*):

> "Había equipos de acciones especiales, cuando esto ha ido creciendo, sobre todo en el desarrollo digital, se ha hecho más grande, más complejo, se ha sofisticado. Nosotros ya no tenemos comerciales de publicidad tradicionales, sino que tenemos figuras que tienden a ser algo más parecido a un consultor" (entrevista 9/07/2020).

Debido al alto consumo del contenido en los dispositivos móviles y a la gran cantidad de impactos a la que se expone al usuario, el rechazo hacia la publicidad más intrusiva como el *display* ha aumentado. Esto ha llevado a las marcas a demandar productos editoriales que les permita integrarse de forma natural en las conversaciones con la audiencia, buscan productos con una filosofía que no se base en la interrupción si no en la construcción de valor, a través de la creación de contenido relevante.

Y aunque en la mayoría de los casos analizados, el *branded content* no resulta ser la principal fuente de ingresos del medio, todos reconocen que en los últimos años el crecimiento está siendo exponencial y sus departamentos no paran de incorporar nuevos perfiles para poder hacer frente al aumento de la demanda. Al gran número de periodistas incorporados en estos departamentos, hay que destacar la suma de perfiles tecnológicos como:

- expertos en SEO y SEM;
- *digital analyst*;
- *data scientist*;
- analista de inteligencia de clientes y CRM;
- *social media manager*;
- *community manager*.

Se concluye que existe una relación constante de los departamentos tecnológicos con los equipos de *branded content* y que se extiende por las distintas fases que comprende el proceso de elaboración del producto. A raíz de las entrevistas se ha podido establecer un patrón metodológico que consta de tres fases donde el aporte de los *big data* es totalmente transversal. Esta inteligencia editorial, que se incorpora al proceso creativo y lo acompaña, tiene la particularidad de que genera un círculo donde se retroalimentan cada una de las fases.

Esa transversalidad en el uso de la inteligencia del dato no se da sólo en las distintas fases de creación del contenido, sino que actúa también como un transmisor de conocimiento entre los distintos departamentos del medio. Para esa transmisión interdepartamental resulta clave una vez más la participación de los perfiles tecnológicos, que a modo de perfiles bisagra, ayudan a que el conocimiento generado en los distintos departamentos del medio trascienda al resto, provocando que se pueda pasar de un sistema estanco a uno líquido que permeabiliza en todo el medio de comunicación.

Por supuesto que la elaboración del *branded content* en los medios requiere, por encima de cualquier otra cosa, un dominio de las técnicas periodísticas y el conocimiento de los formatos editoriales. De hecho, los perfiles que conforman estos departamentos son mayoritariamente periodistas que provienen de editorial y con gran experiencia en ese campo. Si a eso le sumamos la gran gestión que se hace desde la analítica, el SEO y el *social media*, le confiere al producto ofrecido a las marcas un nivel de cualificación tan grande que se ha convertido en uno de los argumentos de venta a la hora de reivindicar el valor añadido de los medios.

El contenido, ya sea de naturaleza informativa o destinado al entretenimiento alimenta las conversaciones y sustenta las audiencias. En un momento en el que las marcas apuestan por la construcción de audiencias y relaciones personalizadas con los usuarios, el conocimiento que tienen los medios les ha situado en una situación privilegiada para poder establecer nuevas transacciones con las marcas.

En esta nueva relación basada en estrategias de contenido y propuestas de formatos editoriales como el *native advertising* se ha vuelto indispensable la monitorización y trazabilidad de las campañas activas para garantizar el cumplimiento de los objetivos marcados, así como la elaboración posterior de informes que interpretan el alcance tanto cuantitativo como cualitativo y que justifican las inversiones realizadas.

Las herramientas diseñadas para la elaboración de los cuadros de mando resultan complejas al disponer de infinidad de variables y unidades de análisis, por lo que la elaboración de métricas y la extracción de conclusiones suele requerir de nuevo, de los departamentos de analítica. Los medios han hecho una apuesta tan fuerte por el *big data* que les está llevando incluso a la elaboración de sistemas de recopilación de datos y diseño de métricas propias para la exploración de nuevos modelos de negocio.

Este convencimiento por parte de los medios a la hora de apostar por departamentos tecnológicos se sostiene en parte por el creciente interés que han mostrado las marcas por poder acceder a los datos de la audiencia, convirtiéndose en una fuente de ingresos cada vez más notoria. La segmentación y creación de plataformas para la comercialización de audiencias de calidad es una realidad en los medios españoles a la que pronosticamos un crecimiento importante si tenemos en cuenta las futuras regulaciones europeas sobre la protección de datos, que pueden favorecer a los medios de comunicación.

Los nuevos modelos de negocio sustentados en las audiencias y los datos generados por ellas pueden formar parte de la fórmula que garantice la sostenibilidad de los medios, aunque para ello, tendrán que hacer frente a varios desafíos como:

- captación y retención del talento tecnológico que lo hace posible;
- preservación del tráfico en los canales propios, con el fin de no ceder el control de las audiencias a las plataformas tecnológicas;
- preservar la reputación de los medios ante los nuevos modelos de negocio.

La mayoría de los entrevistados señalan que el periodismo y los medios de comunicación, al igual que otros muchos sectores, han encontrado en la revolución tecnológica un gran desafío que ha provocado cambios trascendentales. Por ello, generar un conocimiento sobre cómo se está trabajando en el sector genera interés y puede servir de referencia para el ámbito académico y profesional. Será necesario seguir con la observación y análisis de este fenómeno, pues evoluciona a un ritmo vertiginoso.

5. Referencias

Álvarez-Gayou-Jurgenson, Juan-Luis, (2003). *Cómo hacer investigación cualitativa, fundamentos y metodología*. México: Paidós Ecuador. ISBN: 968 853 516 8

Bauman, Zygmunt (2000). *Modernidad líquida*. Buenos Aires, Argentina, Fondo de Cultura Económica de Argentina. ISBN: 950 557 513 0
https://catedraepistemologia.files.wordpress.com/2009/05/modernidad-liquida.pdf

Blay-Arráez, Rocío; **Balado-Albiol, Consuelo**; **Zomeño, Daniel** (2018). "La metodología y la estructura de los departamentos creativos ante el reto de la generación de contenidos. El caso *PlayGround*". En: García-García, Francisco; Tur-Viñes, Victoria; Arroyo-Almaraz, Isidoro; Rodrigo-Martín, Luis (eds.). *Creatividad en publicidad. Del impacto al comparto*. Madrid: Dykinson, pp. 365-390. ISBN: 978 84 9148567

Casero-Ripollés, Andreu (2010). "Prensa en Internet: nuevos modelos de negocio en el escenario de la convergencia". *El profesional de la información*, v. 19, n. 6, pp. 595-601.
https://doi.org/10.3145/epi.2010.nov.05

Castelló-Martínez, Araceli (2018). "La dimensión creativa del concepto de *insight* aplicado a la publicidad. Empatizando con el target de la comunicación persuasiva". En: García-García, Francisco; Tur-Viñes, Victoria; Arroyo-Almaraz, Isidoro; Rodrigo-Martín, Luis (eds.). *Creatividad en publicidad. Del impacto al comparto*. Madrid: Dykinson, pp. 83-114. ISBN: 978 84 9148567

Castells, Manuel (2009). *Comunicación y poder*. Madrid: Alianza Editorial. ISBN: 978 84 206 8499 4

Gaitán-Moya, Juan-Antonio; **Piñuel-Raigada, José-Luis** (1998). *Técnicas de investigación en comunicación social, elaboración y registro de datos*. Madrid: Editorial Síntesis. ISBN: 84 7738 604 8

IAB (2019). *Libro blanco. Branded content y publicidad nativa*. Interactive Advertising Bureau.
https://iabspain.es/estudio/libro-blanco-de-branded-content-y-publicidad-nativa

Jenkins, Henry; **Ford, Sam**; **Green, Joshua** (2013). *Spreadable media: creating value and meaning in a networked culture.* New York: NYU Press. ISBN: 978 0 814743904

Lafuente-Ibáñez, Carmen; **Marín-Egoscozábal, Ainhoa** (2008). "Metodologías de la investigación en las ciencias sociales: Fases, fuentes y selección de técnicas". *Revista Escuela de Administración de Negocios*, n. 64, pp. 5-18.
https://doi.org/10.21158/01208160.n64.2008.450

Lee, In (2017). "Big data: Dimensions, evolution, impacts, and challenges". *Business horizons*, v. 60, n. 3, pp. 293-303.
https://doi.org/10.1016/j.bushor.2017.01.004

Miotto, Giorgia; **Payne, Gregory** (2019). "Branded content: una nueva apuesta para el *New York Times*". *adComunica*, n. 17, pp. 23-39.
https://doi.org/10.6035/2174-0992.2019.17.3

Native Advertising Institute (2020). *The ultimate native ads guide*.
https://blog.nativeadvertisinginstitute.com/native-advertising-ultimate-guide

Newman, Nic (2020). *Journalism, media, and technology trends and predictions 2020*. Oxford: Reuters Institute for the Study of Journalism.
https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2020-01/Newman_Journalism_and_Media_Predictions_2020_Final.pdf

Papí-Gálvez, Natalia (2015). "Nuevos medios y empresas innovadoras. El caso de las agencias de medios". *El profesional de la información*, v. 24, n. 3, pp. 301-309.
https://doi.org/10.3145/epi.2015.may.10

Regueira-Mourente, Francisco-Javier (2012). *El contenido como herramienta eficaz de comunicación de marca. Análisis teórico y empírico*. Tesis doctoral. Madrid: Universidad Rey Juan Carlos.
https://burjcdigital.urjc.es/handle/10115/11415?show=full

Soler, Pere (2011). "La investigación cualitativa. Un enfoque integrador". En: Vilches, Lorenzo (coord.). *La investigación en comunicación. Métodos y técnicas de la era digital*. Barcelona: Gedisa. ISBN: 978 8497846691

Salaverría, Ramón (2015). "Ideas para renovar la investigación sobre medios digitales". *El profesional de la información*, v. 24, n. 3, pp. 223-226.
https://doi.org/10.3145/epi.2015.may.01

Scolari, Carlos (2013). *Narrativas transmedia: cuando todos los medios cuentan.* Barcelona: Grupo Planeta. ISBN: 978 84 234 1582 3

Vilches, Lorenzo (coord.) (2011). *La investigación en comunicación. Métodos y técnicas en la era digital*. Barcelona: Gedisa Editorial. ISBN: 978 8497846691

Villafañe, Justo; **Ortiz-de-Guinea-Ayala, Yolanda**; **Martín-Sáez, José-Luis** (2020). "Reputación de los medios de comunicación españoles". *Profesional de la información*, v. 29, n. 4, e290407.
https://doi.org/10.3145/epi.2020.jul.07

Wimmer, Roger D.; **Dominick, Joseph R.** (1996). *La investigación científica de los medios de comunicación*, Colección Bosch Comunicación. Barcelona: Editorial Bosch.

BOLETÍN DE SUSCRIPCIÓN

El profesional de la información

Deseo suscribirme a la revista EPI a partir del mes de enero del año 20 ___ Las suscripciones van por años naturales, de enero a diciembre

Suscripción ☐ Institucional ☐ Personal

Nombre ___ Institución ___

(Los suscriptores individuales no han de escribir ningún nombre de institución, sólo indicar la dirección particular)

Departamento ___ NIF institucional ___

Dirección ___ Código postal ___ Ciudad ___ País ___

Teléfono ___ Fax ___ Correo-e ___

Método de pago

☐ Tarjeta de crédito ☐ VISA ☐ Master Card

Titular de la tarjeta ___ Código de seguridad CVC2 ___

Número de tarjeta ___ Caducidad (mm/aaaa) ___

☐ Cheque nominativo en euros a nombre de *El profesional de la información*

☐ Transferencia bancaria a la cuenta de La Caixa **ES95 2100 0818 93 0200745544** Enviar, fotocopiado o escaneado, el resguardo de la transferencia.

☐ Giro postal al apartado de correos 13 de León Enviar, fotocopiado o escaneado, el resguardo del giro.

☐ Domiciliación en cuenta bancaria

Entidad ___ Oficina ___ DC ___ Núm ___

Titular de la cuenta ___

☐ PayPal a la cuenta EPISCP@gmail.com

Enviar el boletín cumplimentado por correo electrónico, o postal al APARTADO 13 - 24080 LEÓN - ESPAÑA.
Consultas: suscripciones@elprofesionaldelainformacion.com o +34 608 491 521

Open choice. Los autores pueden liberar su artículo en open access en las webs de *EPI* mediante el pago de 890€ + 21%IVA

Precios 2021

Importante: Desde enero de 2015 EPI sólo se publica online

Suscripción institucional EPI: 150 € + 4% IVA = 156 €

Suscripción personal: 105 € + 4% IVA = 109,2 €

Número suelto: 35 € + 4% IVA = 36,4 €

NORMAS PARA LOS AUTORES

El profesional de la información tiene dos secciones principales:

ARTÍCULOS: Trabajos de investigación y temas analizados en profundidad.
ANÁLISIS: Experiencias, estudios de casos, análisis de productos, etc.

Las contribuciones han de ser originales e inéditas, no pueden haberse publicado previamente en soporte papel o electrónico.

El texto ha de enviarse en Word, rtf u odt. Las tablas deberán ir pegadas en el mismo documento. Todos los materiales gráficos (diagramas, fotografías, capturas de pantalla, etc.) deben pegarse en el Word y además enviarse en ficheros independientes (en formatos xls, jpg, pdf, etc.). Las imágenes jpg deben tener una resolución de al menos 300 pp (unos 200 KB cada una).

El texto debe presentarse completamente plano, sin autoformatos ni automatismos de Word (subsecciones, viñetas, citas enlazadas, pies de página, sangrías, tabulaciones, colores, etc.), pero debe seguir el estilo de EPI en cuanto a **negritas** (nombres de los autores citados), *cursivas* (instituciones, títulos de revista, marcas) y mayúsculas. Los urls deben estar sin hipervínculo.

Las citas bibliográficas en el texto se realizarán de la forma: (**Apellido**, año) o (**ApellidoAutor1**; **ApellidoAutor2**, año).

La redacción debe ser concisa y precisa, evitando la retórica.

Los trabajos deben incluir: a) título, b) resumen de 100-150 palabras, c) 5-10 palabras clave, d) title, e) abstract de 100-150 palabras, f) 5-10 keywords.

Aparte se incluirá el nombre de los autores, su lugar de trabajo y dirección (postal y electrónica), su foto tipo carnet superior a 100 KB en jpg, un currículum de unas 70 palabras, y su orcid.

EVALUACIÓN

Los trabajos son revisados según el sistema tradicional "peer review" en doble ciego por al menos dos expertos en el tema, del Consejo Asesor de la revista y/o externos. La revista se compromete a informar del resultado a los autores.

REFERENCIAS BIBLIOGRÁFICAS

Ordenadas alfabéticamente por autor, se limitarán a las obras citadas en el artículo. No se acepta bibliografía de relleno.

Artículos de una publicación periódica:

Apellido, Nombre; **Apellido2, Nombre2** (año). "Título del artículo". *Título de la publicación periódica*, v., n., pp. xx-yy.
Dirección url iniciada en nueva línea sin barra y sin punto finales
https://doi.org/10.xxxx/doi

Ponencia presentada en un congreso:

Apellido, Nombre; **Apellido2, Nombre2** (año). "Título de ponencia". En: *Nombre del congreso*, pp. xx-yy.
Dirección url iniciada en nueva línea sin barra y sin punto finales
https://doi.org/10.xxxx/doi

Monografías e informes:

Apellido, Nombre; **Apellido2, Nombre2** (año). *Título del trabajo*. Lugar de publicación: editor, ISBN: espacios, sin guiones y sin punto final
Dirección url iniciada en nueva línea sin barra y sin punto finales
https://doi.org/10.xxxx/doi

Capítulo de una monografía:

Apellido, Nombre; **Apellido2, Nombre2** (año). "Título del capítulo". En: Apellido, Nombre; Apellido2, Nombre2. *Título de la monografía*. Lugar de publicación: editor, pp. xx-yy. ISBN: espacios, sin guiones ni punto final
Dirección url iniciada en nueva línea sin barra y sin punto finales

Recurso online:

Apellido, Nombre; **Apellido2, Nombre2** (año). *Título del recurso (sin fecha de la consulta)*.
Dirección url iniciada en nueva línea sin barra y sin punto finales

Todas las contribuciones se tienen que enviar a la sección *EPI* de la plataforma *OJS* del *Repositorio Español de Ciencia y Tecnología* (*Recyt*) de la *Fecyt*:
http://recyt.fecyt.es/index.php/EPI/index

Previamente los autores deben registrarse en:
http://recyt.fecyt.es/index.php/EPI/user/registerJournal