Media labs: journalistic innovation, evolution and future according to experts

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Abstract

At the current crossroads at which both the media and journalism find themselves, innovation emerges not as a "nice to have" but as an absolute, urgent, and pressing necessity. In this context, labs are presented as a structured and –in a certain way– privileged space to do so. However, since there are also voices that are critical of these spaces, we ask to what extent they contribute to journalistic innovation and also what future these spaces may have. To find out, we conducted semistructured interviews with a nonprobabilistic sample of 18 experts in this field, because they are both associated with a lab and are qualified experts in journalistic innovation or they are academic researchers. The results show that labs can bring a media outlet both tangible and intangible benefits, ranging from increased audience, audience loyalty, and revenue to increased prestige and reputation. However, today their future is uncertain owing to a variety of factors, including the funding necessary but also the utopian nature of the idea that the DNA of innovation can permeate the entire media outlet when there is no space specifically dedicated to designing, generating, and disseminating it to the newsroom as a whole.

Keywords

Media labs; Innovation; Experimentation; New narratives; Journalism; Experts; Spain.

1. Introduction

> "The degree of disruption that the internet has brought to our information ecosystem is so total, so huge, so unknown in many ways –we can't expect anything other than a constant need to change."

This was recently expressed by Ros Atkins, a *BBC* journalist, who also pointed out that we live in an era of extreme creativity and that journalism should be able to keep pace with a broad view in the search for inspiration. Otherwise, he continued, we run the risk of audiences finding the news tiresome and limited compared with other products they consume. In this context, innovation consequently becomes something nonnegotiable –just like verifying data correctly, having good storytelling ideas, or being unbiased (**Atkins**, 2022).

Defined as

> "the ability to react to changes in products, processes and services through the use of creative skills that make it possible to identify and solve a problem or meet a need in a way that results in the introduction of something new that adds value to consumers and therefore increases the viability of the media organization" (**García-Avilés** *et al.*, 2019, pp. 3-4),

media innovation today is revealed as a

> "crucial asset for the survival of the media industry" (**Weiss**; **Domingo**, 2010, p. 1158)

to the point that, more than simply a task, it has become an essential mindset –perhaps the only possible one– to cope with a clearly disruptive information ecosystem.

In this regard, several authors have argued that, if traditional media want to remain relevant to their audiences in the new digital ecosystem, it is not enough for them to simply adapt; rather, they need to substantively reinvent themselves (**Westlund**; **Lewis**, 2014; **Küng**, 2015; **Paulussen**, 2016; **Fortunati**; **O'Sullivan**, 2019). Logically, **Porcu**, **Hermans** and **Broersma** continue (2020, p. 1420), this will not happen overnight but rather requires a new culture of innovative (**Porcu**, 2020) and resilient learning (**Seville**, 2017). In opposition to this, what is apparent to several researchers (**Ryfe**, 2012; **Buijs**, 2014; **Usher**, 2014; **Tameling**, 2015) is that newsroom culture has, to date, been more of an impediment –and not an impetus– to change and renewal. The desired innovative learning culture should embrace innovation in both its application and its exploration (**March**, 1991; **O'Reilly**; **Tushman**, 2013) and also all its elements, including –in the model of **García-Avilés** *et al.* (2019, pp. 11-13)– the areas and objectives of the innovation, the types of actors, the drivers, and the results, so as to minimize the impact of possible impediments at the same time.

Innovation is precisely the purpose for which the first media innovation labs were created two decades ago. According to their first definition, labs are

> "units or departments dedicated to the research, experimentation, development and implementation of technological and editorial innovations in their organizations" (**Salaverría**, 2015, p. 398).

According to **Tanaka** (2011), they tend to focus on new technologies to design, research, experiment, and innovate technologically and socially through the collaboration of various disciplines. In this sense, these are highly innovative internal management formulas that, in a number of instances, began as spaces for the creation of new narratives and, over time, have been transformed into product development laboratories. Other times, they have continued to be departments committed to the exploration and creation of interactive digital narratives, taking advantage of the possibilities generated by the evolution of the Internet itself.

At the same time, such labs are places of experimentation that have appeared as a strategic response to the current situation that many media outlets are dealing with today; they are experiencing a serious multifactorial crisis that urgently calls for new narratives, products, and services that meet the news needs of a consumer who has disconnected from the traditional media system and has opted to choose other ways of remaining informed.

In this context, it seems wise to have independent spaces in which to think, analyze, and test but –above all– have enough time and perspective to design different solutions, a necessity that is impossible to achieve in the frenetic pace of day-to-day operations. In this way, it is understandable that labs have been seen as a lifesaver for the media outlets in which they are integrated, due to their effective contribution in creating new narratives, new revenue streams, or even new audiences (**García-Avilés**, 2020; **Zaragoza-Fuster**; **García-Avilés**, 2020; **Zaragoza-Fuster**, 2022), something that also occurs in second-generation innovation labs.

The latter are those labs created between 2017 and 2021. Essentially, they differ from their predecessors in that they are more integrated into the organizational structures of the newsrooms, which allows them to more efficiently meet the needs of journalists who, in addition, work in specific phases of production (**Hogh-Janovsky**; **Meier**, 2021; **Zaragoza-Fuster**; **García-Avilés**, 2022; **García-Avilés**, 2023). Following these authors,

> Labs are highly innovative internal management formulas that, in a number of instances, began as spaces for the creation of new narratives and, over time, have been transformed into product development laboratories

these labs 2.0 are also characterized by their employees' multiple efforts to act as a driver of innovation for the transformation of their organizations through knowledge transfer, the sharing of new ideas and approaches through advanced training, exhaustive and transparent communication of innovation, follow-up of agile projects, and staff rotation. In addition, these second-generation labs are more oriented toward the design of new, sustainable business models. To this end, they employ a process of constant learning and dynamic change. In more practical terms, **Cools**, **Van-Gorp**, and **Opgenhaffen** (2022) distinguish three types of working methods:

- static (where the lab team works alone),
- dynamic (where lab members collaborate with other professionals, such as the organization's journalists or engineers), and
- a method that is a hybrid of both types.

However, because there is no shortage of critical voices regarding the existence of innovation labs, we ask to what extent they contribute to journalistic innovation and what future they may have. This is the purpose of this article: to delve into experts' views on what is labs' main contribution to journalistic innovation and what can be expected from these spaces from this moment on, after some of the first ones have closed, thus giving certain signs of running out of steam, or at least in terms of their first formula (**García-Avilés**, 2020).

If today innovation is more important than ever as a strategic response to the multifactorial crisis affecting journalism and the media, and if labs are spaces specifically designed to encourage innovation, how is it that some of them have had such a short track record? What are the keys elements that guarantee their success? Specifically, in this text, we aim to answer the following two research questions:

> RQ1. According to experts, what is such labs' main contribution to journalistic innovation?

> RQ2. What future do they foresee for these spaces?

The results are presented below. First, we present a brief description of the hallmarks of these innovation units.

2. Labs as catalysts for journalistic innovation

According to some of the main contributions on the origin of media labs (**Salaverría**, 2015; **Donaire-Pitarch**, 2016; **Sádaba**; **Salaverría**, 2016; **González-Alba**, 2017; **Sixto**, 2019; **Zaragoza-Fuster**; **García-Avilés**, 2022), the first media lab was developed by the North American press group *Knight Ridder* in Boulder, Colorado. It was headed by Roger Fidler, who led a multidisciplinary team composed of journalists, designers, technologists, and researchers. His most prominent project was the newspaper tablet, a prototype predating today's tablets. In Spain, the lab created by *El Periódico de Catalunya*, led by Mario Santinoli, who wanted to develop a similar tablet, stands out. Starting in 2010, an international boom of these spaces began after leading media outlets such as *The New York Times*, *The Washington Post*, *The Boston Globe*, *the BBC, Agence France-Presse* (*AFP*), *The Huffington Post*, and *The Guardian* took a chance and began to lead their development.

In the United States, *The New York Times*'s lab, which was launched in 2006 and was later restructured into the Research & Development Lab, stands out. Serving similar functions, those at *PBS* and *The Boston Globe* seek to innovate from different perspectives that also include the creation of new journalistic projects and media literacy. Other labs have discontinued their activity. In 2015, *Buzzfeed*, for example, announced the launch of the *Open Lab for Journalism Technology and the Arts*; however, it closed two years later. During its run, they experimented with bots, drones, sensors, and spherical video, although in the end they realized that it was better to integrate the lab staff into the newsroom naturally rather than working independently. For some years now, the ongoing trend in the United States seems to be to incorporate innovation through development teams called "Research and Development" that experiment with the product and the business model.

In Latin America, innovation labs can be found in countries such as Argentina, Brazil, and Peru.

- In Argentina, *Nación Content Lab* was created in 2015 as a new marketing solution for brands interested in reaching their audiences through relevant, quality content.
- In Peru, *OJOLabs* –linked to the digital native *Ojo Público*– has created different interactive specials.
- In Brazil, the newspaper *Agência Pública*'s lab has experimented with different technologies and formats.

In Europe, Spain is one of the countries with the highest concentration of labs, including active ones as well as those that have been disappearing. It is followed by the United Kingdom, Germany, France, Norway, Portugal, Italy, Ireland, Switzerland, Finland, and the Netherlands. The first European media lab, *Medialab*, from the French news agency *France Press*,[1] began its operations in the first decade of the millennium. Among the European labs, we find those from prestigious media outlets, such as the *BBC News Lab* from the British public broadcaster the *BBC*, that of the French news agency *AFP*, that of *The Guardian*, or that of the Italian radio and television network *RAI*. However, some of them closed shortly after opening. Of the 28 European labs identified by **Zaragoza-Fuster** and **García-Avilés** (2022), 20 are still active. *RAI*'s lab, for example, closed a year after its creation, whereas others have been restructured and have been trying different approaches (**Nunes**, 2020; **Nunes**; **Mills**, 2021; **Mills**; **Wagemans**, 2021).

Despite the explosion in the number of labs in the 2010s –especially in 2012 and 2014– also due to a commercial boom, this has subsequently subsided, either because no new labs have appeared or because existing ones have been restructured or even disappeared. In fact, the phenomenon has not been immune in a way since, according to **Salaverría** (2015, p. 403), it seems more trendy to say that there is a lab than a conventional infographics and multimedia department. However, it is worth recalling, along with Küng, the importance of distinguishing between innovations based on business strategies and technological devices, which she calls "shiny new things." In this regard, Küng criticizes that many news organizations have abandoned long-term strategic planning in favor of short-term innovation projects that turn out to be merely tactical and opportunistic and consequently present a competitive weakness (**Küng**, 2017, p. 15).

The fact is that a comparative analysis of the different labs together with a review of the academic and professional literature on the subject offers up a series of similarities and differences. Among the former, labs are characterized by a strong commitment to innovation and a determination to extend innovation to the entire media outlet, being formed by small but multidisciplinary teams and having a certain degree of autonomy with respect to the newsroom and working

with agile methodologies, which allows them to innovate in a fast, economical, efficient, and dynamic way.

The strong commitment to innovation is, indeed, one of the central features of any lab, as well as its raison d'être (**Sádaba**; **Salaverría**, 2016, p. 158). This innovation extends to different areas, although the most common has to do with the development of digital narratives. At the same time, this commitment to innovation also becomes a challenge, as it sometimes surpasses expectations and leads to a failure that the media outlet must shoulder. On the more positive side, media labs have managed to develop different narratives such as interactive infographics, scrollytelling, interactive documentaries, other interactive specials, newsgames, and immersive reports with 360° video, to name but a few of the most common types of nonfiction digital stories in recent years. Other times, innovation has included the discovery of new revenue streams or novel subscription systems.

> Labs are also places of experimentation that have appeared as a strategic response to the current situation that many media are dealing with today; they are experiencing a serious multifactorial crisis that urgently calls for new narratives, products, and services that meet the news needs of a consumer who has disconnected from the traditional media system

As part of a lab's commitment to innovation, it does not limit itself to generating it; rather, it seeks to disseminate it (**Rogers**, 2003) and extend it to the entire media outlet (**López-Hidalgo**; **Ufarte-Ruiz**, 2016, p. 11), albeit with varying levels of success (**Zaragoza-Fuster**; **García-Avilés**, 2020).

Ideally, their existence would become unnecessary because the entire editorial staff would organically take on the culture of innovation. According to **Porcu** (2020) and **Valero-Pastor** (2020, p. 213), only those companies that foster a true learning culture among their members have the opportunity to:

- Innovate (**Cameron**; **Quinn**, 2011; **Heijboer**; **Korenhof**; **Pantjes**, 2013);
- Gain competitive advantages (**Porter**, 1985; **Watkins**, 1996; **Baars-Van-Moorsel**, 2003; **Yolles**, 2009);
- Transform themselves through the creation of new knowledge (**Nonaka**, 1994; **Wang**; **Su**; **Yang**, 2011; **Schenke**, 2015);
- Survive market disruptions over the long term (**March**, 1991; **O'Reilly**; **Tushman**, 2013).

At this point, the lab can be at the forefront of the aforementioned culture of innovative learning. According to Porcu, this is defined as:

> "a social climate that encourages people to work and learn together, to grow as individuals and as a group (team, organization), and that provides people with the autonomy to be flexible, to experiment, to be creative and to investigate radical possibilities so that the organization has a better chance of surviving in the long run. This is facilitated by servant leadership, open communication, mutual trust, a supportive culture, shared goals, valuing individual achievement, and training and development" (**Porcu**, 2020).

In practice, this culture can be transmitted in various ways. Following **Valero-Pastor** and **Carvajal-Prieto** (2019, p. 1160), the diffusion of innovation in a news organization includes teaching systems –formal, informal, and hybrid– and communication systems –formal, informal, and hybrid– as well as professional resources such as employee exchange groups, interdepartmental visits, or ambassadors, who, as early adopters, act as "evangelists" of a particular innovation for the rest of the newsroom. On other occasions, knowledge transfer occurs through creative formulas such as the *El Confidencial Lab Day* (**Valero-Pastor**, 2020). Logically, technology can be a great ally for this purpose through the use of IT tools such as emails, newsletters, or services such as *Trello*, *Asana*, *Jira*, or *Slack* that dynamize, streamline, and simplify team collaboration by optimizing workflows (**Valero-Pastor**; **Carvajal-Prieto**; **García-Avilés**, 2019, pp. 8-9).

The labs are made up of small but multidisciplinary teams. The small size of these structures enables the generation of flexible and adaptive entities that are open to experimentation (**Palomo**; **Palau-Sampio**, 2016). In turn, multidisciplinary teams bring together journalists with other professionals such as graphic designers, video-makers, programmers, and IT developers with the idea of designing more contextualized and feature-rich journalistic products and services (**Küng**, 2015; 2017; **Zaragoza-Fuster**; **García-Avilés**, 2022).

In turn, these multidisciplinary teams enjoy a certain degree of autonomy, allowing them to accommodate two or even three working speeds. In this sense, labs have dynamics independent from the rest of the media outlet, which gives them greater flexibility to adapt to new market standards and create more attractive and complete products (**Valero-Pastor**, 2020, pp. 234-235). According to **Mills** and **Wagemans** (2021, p. 11), this is also intended to ensure a certain distance from the hierarchical structures and routines of media organizations.

In addition, innovation labs are characterized by stimulating the flow of ideas and the development of collaborative projects, with facilities physically configured to employ efficient and agile methodologies such as design thinking, problem solving (**Moultrie**; **Stevens**; **Crilly**, 2008), lean startup methodology (**Ries**, 2011), scrum methodology (**Maximini**, 2015; **Schwaber**; **Sutherland**, 2017), and *XP*, *Crystal*, *Kanvan*, or *Scrumban* programming, to name some of the most common (**Valero-Pastor**; **Carvajal-Prieto**; **García-Avilés**, 2019, pp. 4-8). In many cases, they start with the "minimum viable products" with which they offer incremental value propositions to make them grow or to "pivot them" (in the jargon) and make whatever corrections are necessary.

On the other hand, labs are differentiated by the main focus of their activity and by their specialization in one type of interactive narrative or another. In the first instance, most first-generation labs were oriented, for example, toward exploring new narratives, formats, and data journalism and, to a lesser extent, toward technologically developing digital applications, promoting projects or startups, and making citizens literate in the critical consumption of media (**Salaverría**, 2015, p. 401).

As for the narratives in which they specialize, the most common are interactive infographics (**Vizoso**, 2020), scrollytelling (**Rojas-Torrijos**, 2014), podcasting (**Orrantia**, 2019), newsgames and gamified narratives (**García-Ortega**; **García-Avilés**, 2018), transmedia productions (**Scolari**, 2013), and interactive documentaries (**Vázquez-Herrero**; **González-Neira**; **Quintas-Froufe**, 2019; **Vázquez-Herrero**; **López-García**; **Gifreu-Castells**, 2019), which include video and are enriched with photo galleries, infographics, and scrollytelling to facilitate the assimilation of information and thus make it more didactic, dynamic, media rich, and entertaining. To a lesser extent, some labs have also explored the potential of drones and immersive reporting with 360° video (**Benítez-de-Gracia**; **Herrera Damas**, 2020). In Spain, the latter is the case of the labs at *El Confidencial* and, above all, *RTVE*.

3. Methodology

After this brief conceptual and contextual presentation of the labs, we will see what the experts' perception of the extent to which labs contribute to journalistic innovation is and what the future holds for these spaces. To find this out, between 2021 and 2022, we conducted semistructured interviews with a nonprobabilistic sample of experts with some of the most prominent voices in media innovation in general and in these labs in particular.

Indeed, following **Hernández-Sampieri**, **Fernández-Collado** and **Baptista-Lucio** (2010, p. 396), the types of samples that are usually used in qualitative research are nonprobabilistic or directed, whose purpose is not generalization in terms of probability. They are also understood to be "guided by one or a variety of purposes" because the choice of elements is dependent upon reasons related to the characteristics of the research. In turn, we opted for the semistructured interview modality (**Howitt**, 2019), as it ensured that the interviewees' responses covered the two central issues that we address in this article. In this case, we also opted for a sample of experts (**Hernández-Sampieri**; **Fernández-Collado**; **Baptista-Lucio**, 2010, p. 397), which requires the opinion of individuals with a qualified view on the subject. In turn, this view was contingent on the interviewee's own ties to a lab, in particular, on their status as experts in innovation in the media outlet, or on the fact that they are academic researchers. To conduct the interviews, we followed the usual procedure in these cases, systematized by authors such as **Young** (1960) and **Howitt** (2019). To provide a more complete view, we wanted to triangulate the academic and professional perspectives.

To select the candidates, we took into account some of the contributions they had made to the object of study, either from a theoretical point of view or from a professional perspective by being involved –at the time of the interview or at some previous time– in media innovation or in a particular lab. The following table provides a brief summary of each of them. To learn more about their careers, you can consult each of the links.

Table 1. List of experts interviewed

Name	Position	University/media outlet/lab	Role
Miriam Hernanz	Lab director[2]	*RTVE Lab*	Lab professional
Carol Espona	Journalist	*RTVE Lab*	Lab professional
César Peña Martínez	Journalist	*RTVE Lab*	Lab professional
Alejandro Laso	Director of Strategy and Innovation	*El Confidencial Lab*	Lab professional
Guiomar Del Ser	Editor-in-Chief of Editorial Product	*El País Lab*	Lab professional
Javier García Fernández	Journalist and lab manager	*Expansión Lab*	Lab professional
Àlex Badia	Co-founder	*Barret Films*	Expert in media innovation
José Antonio González Alba	Journalist	*SembraMedia*	Expert in media innovation
Alfredo Casares	Journalist	*Institute of Constructive Journalism*	Expert in media innovation
Michaëla Cancela	Audio editor	*Agence France-Presse*	Expert in media innovation
José-Alberto García-Avilés	Professor of Journalism	*Universidad Miguel Hernández*	Academic researcher
Miguel Carvajal-Prieto	Tenured professor	*Universidad Miguel Hernández*	Academic researcher
José-Manuel Noguera-Vivo	Tenured professor	*Universidad Católica San Antonio*	Academic researcher
Ainara Larrondo-Ureta	Tenured professor	*Universidad del País Vasco*	Academic researcher
Luis-Miguel Pedrero-Esteban	Professor	*Universidad Nebrija*	Academic researcher
José-Luis Rojas-Torrijos	Tenured professor	*Universidad de Sevilla*	Academic researcher
José-María Valero-Pastor	Professor	*Universidad Miguel Hernández*	Academic researcher
Teresa Zaragoza-Fuster	Journalist and teacher	*Universidad Miguel Hernández*	Academic researcher

In each case, we developed the interview guide from a series of common questions.[3] In line with the research questions we have outlined, the questions we posed to interviewees were:

RQ1. What would you say media labs contribute to journalistic innovation?

RQ2. What future do you foresee for innovation labs in Spain and in the world?

After conducting the interviews on the day and at the time preferred by each of the 18 interviewees, and with their permission, we proceeded to record and transcribe the content,[4] which we then organized and categorized. To analyze the results more efficiently, we found it very useful to work with the *Atlas.ti* software (version 22), examining the content first at a textual and then at a conceptual level, recognizing networks and connections between the views but also similarities, differences, and nuances between the different statements. The result of successive readings allowed us to ensure internal consistency and thus move forward with systematization. Finally, we proceeded to write up the results, which we now present. It should be noted that we had explicit permission from the sources to publish their statements without anonymity and also that the interviewees were given a period of time to refine the content of their statements in a fairly definitive version of the text.[5]

4. Results

4.1. Contributions to journalistic innovation

When asked how labs contribute to innovation, the answers were diverse but also complementary. For Zaragoza-Fuster, labs are the key to innovation in the media, as they offer both new working methods to newsrooms and new formats for audiences. For García-Avilés, a lab is innovative to the extent that it provides a "tangible or intangible benefit to the medial outlet". In turn, this benefit may take different forms: increased audience, increased loyalty, new revenues through new channels, and increased prestige of the media outlet by winning awards, recognition, distinctions, and, in short, any other form that may represent added value.

Similarly, one of the most common responses was to consider labs as privileged spaces for innovation and very useful systems for implementing it. Based on the premise that innovation consists of meeting needs and solving problems, through creative solutions, Carvajal-Prieto emphasized that the laboratory is a space that allows him to focus exclusively on it. But, he points out, he cannot work in a vacuum:

"(...) it is a *sine qua non* condition to have data so that the problems that they are solving are real and that these solutions are transferred; otherwise, it would not help innovation. It would be generating either isolated products that are not published or products about nothing, about rather experimental or theoretical problems" (Carvajal-Prieto, 2021).

Hernanz, for whom the loyalty gained from the reader, user, or viewer is "much, much greater" if it is based on the desire to meet a need, referred to the need for the lab to know the media outlet's audience very well and establish two-way communication with them:

"(...) the more we know our audience, the more we understand what they need, the better we will do our job, and therefore it is very necessary to have an open communication channel with them because, as they are also sources, they will tell us things, they will put us on track and, in turn, then we can do our journalistic practice of verifying, making our calls, etc." (Hernanz, 2021).

Regarding the working method provided by the lab, Noguera-Vivo believed that traditional media outlets were guilty of having a somewhat haughty and hierarchical view about telling the audience what they needed to know, while current forms of entrepreneurship are more humble, trying to find out what their needs are first. In this sense, labs offer a method to more efficiently concretize the view of journalism as a service, since innovation is something that arises as a result of a method, to make the digital media outlets' design seem more reliable and to make a product that focuses preferentially on the user:

"(...) traditionally, journalists have been very romantic and have thought that their profession was only about generating content, but now that the media scene has become so complex and we have seen that you have to do something more so that your good content reaches the audience, I think that media labs have also given that intuition, that nose for news, a method, a methodology, because innovation is not something that you come up with because you woke up inspired one morning" (Noguera-Vivo, 2021).

In addition, the idea of the lab as a space in which the different roles can be positioned has also emerged:

"It was necessary to create a place for these roles, and surely the media lab was the most suitable place" (Noguera-Vivo, 2021).

The lab is also referred to as a space in which decisions are made. This was the opinion of Pedrero-Esteban, for whom this type of department is, in a certain way, the spearhead of the media, as it opens paths that can then be followed by the other members of the newsroom and the organization, since innovations are not only limited to the final result but can also be related to modifying the organization of work, processes, distribution, monetization, metrics, etc. In this sense, Pedrero continues, the labs provide the ability to work with perspective and to imagine as yet unknown ways of doing things.

To make decisions from this wider perspective, the respite made possible by the lab is essential. Without it, Hernanz pointed out that it seems very

> "difficult to find innovation; it is very difficult to really leave behind what you already know how to do because the inertia is to do what you already know, shake it off, and move on to something else" (Hernanz, 2021).

In a similar sense, Casares thought that the lab provides a space and a place where you can ask yourself different questions, experiment, analyze what others do, analyze what you do yourself, and above all, try things out. "And when you try something out and, in addition, include diverse roles, certain things start to happen". In this way, he continued, the lab has emerged as a strategic response to a very real need that the media are experiencing today: "of providing value in a society that is rapidly changing" (Casares, 2021).

For Rojas-Torrijos, labs act as a testing ground, like a radar that scans everything that is happening in terms of journalistic innovation, inside and outside of the country:

> "It usually has a team of people who are dedicated to studying, thinking, and creating, something so valuable and important in a time when, in the media, everything is done too quickly. In addition, its structure, which usually brings together professionals from different fields and roles, such as editors, designers, and programmers, shows that the future of journalism also lies there: by adopting integrative and cross-cutting work formulas because, with this perspective, new stories can be offered to audiences, trying out new angles and supported by new ways of telling what is going on and what is of interest to people" (Rojas-Torrijos, 2021).

In Del Ser's opinion, labs are above all catalysts for innovation and a change of approach, by modifying the way a journalistic assignment is tackled and thus forcing colleagues to think differently. To Peña Martínez, labs catalyze innovation in those media outlets that decide to equip themselves with them. In this sense, he understands that part of his job is to push editors with more ingrained habits and ways of doing things out of their comfort zone and motivate them so that they are able to overcome their resistance (Peña Martínez, 2021).

For Larrondo-Ureta, labs can contribute to innovation in many ways since innovation is a multidimensional concept that encompasses technological, procedural, and technical aspects related to software, apps, and platforms, but it also includes innovation related to topics, coverage, approaches, formats, genres, and narratives.

From a more applied perspective, Laso illustrated the ways in which *El Confidencial*'s lab has been a catalyst for its newsroom, but also –on other occasions– even for other media outlets that have "jumped on" the bandwagon by showing a path that they had not explored but which they also want to join. And in this sense, he mentions innovations such as the automated writing of news related to sports, weather, lottery, and issues "that are easy to write on". In his opinion, another advantage of this type of automation is that it frees professionals up to dedicate themselves to doing more journalistic work, which is more complex and requires more "gray matter" (Laso, 2021).

For Cancela, labs' contributions to innovation are numerous because they are also the very areas in which innovation can take place through multidisciplinary teams that have the time, resources, curiosity, and desire to explore, research, and create. She mentioned, for example, how to use ultra-localized data journalism, virtual reality, artificial intelligence, and facial recognition technologies that are already being applied in many other fields, including policing, entertainment, and language studies:

> "In our field, it is rare that there are real innovations, but there are new applications of technologies that are here and we have to think about what applications we can use them for. Nobody is going to do it because we are the ones who know the needs of our users and our own needs" (Cancela, 2021).

According to González Alba, labs add to the culture itself and to the essence of what it means to innovate by implementing new solutions:

> "That's what innovation is all about: trying to achieve the same objectives we have as a company, but doing things differently because what we had is no longer working for us. This focus now on readers, this experimentation with our users' data when it comes to offering them content –not only that they demand, but that they need– is the essence of the innovative culture within the media. And a very efficient way to implement this is through these media labs" (González Alba, 2021).

For Valero-Pastor, labs' contribution to innovation is highly dependent on the media outlet. *El Confidencial*, for example, does have everything and is a driver of innovation, although he also looks favorably upon those media outlets that do not have a lab as such but have decided to spread innovation throughout different departments and units:

> "(...) I believe that it is not necessary to have an innovation lab to innovate in media outlets. This innovation can simply be distributed across several departments and units and it's not necessarily required to create a department as such to innovate" (Valero-Pastor, 2021).

> The labs offer tangible and intangible benefits for the media outlet, new working methods for newsrooms, and new formats for audiences

4.2. The future of labs

When asked about the future of labs, the interviewees reflected a wide variety of views –including those who believed that there will be fewer, that there will be more, or that their future depends on various factors, and those who answered that they do not know what the future holds for them. In the first group, there were those who believed that, in the future, labs will be dispersed into new professional figures within the newsroom. This is what Carvajal-Prieto, for example, believed; for him, the future will involve creating figures and roles more specialized in the tasks that used to be solved by labs: the head of product, head of visualization, chief data officer, audience manager, etc.

Similarly, for Noguera-Vivo, the desirable end point would not be to fall victim to their own success but rather to have achieved their objective and, once the culture is in place, to relocate roles and continue working in the same line. Even so, he thought that we are still far from that ideal point at which a media outlet could say that it did not need a lab because it already has a culture of innovation that permeates the entire institution.

For Laso, labs make sense as they have been created: "the thing is that they have to evolve" because, if the innovation unit is entrusted only to one group of people, it wastes the potential for the entire workforce to have that mentality. And, in this sense, he believed that the international trend will be to no longer be units called labs and to end up integrating into other units that, in turn, are infused with all the energy and take on the way of working that was carried out in the lab (Laso, 2021).

While recognizing the value of this vision, Casares also considered it to be idyllic and utopian:

> "What happens is that this is not normally the case. The newsroom has a very specific, fundamental, priority mission, which is to create content to fill a website, to produce a newspaper every day, to produce a radio or television bulletin, every day. And this activity consumes a lot of energy (...). The day-to-day tends to take up a percentage of people's time that is usually close to 100% with the result that the space for innovation and creation disappears" (Casares, 2021).

If a newsroom is capable of integrating that spirit and sustain it, "fantastic", Casares continued. Otherwise, "I think everyone has to see to what degree they have to sustain or incorporate it". In a very similar vein, Valero-Pastor stated that there needs to be someone thinking about the future in terms of both products and business models, and not just content or short-term products. And that "someone" can be integrated into a lab or into the rest of the editorial staff, but it is necessary for them to exist.

Similarly, González Alba believed that, to the extent that the different technological possibilities and tools allow the profession to improve, experimentation and a commitment to innovation will continue to be necessary "whether or not it is through a lab". And, as examples of these new trends, he mentioned virtual reality and artificial intelligence. For Del Ser, as well, it is necessary to prioritize this type of work by giving it its own unit. Far from seeing labs as "a luxury that can be dispensed with in times of need", it would be advisable for companies to make the effort to preserve that small cell in which they can think better and differently so that they can then spread this to structures and workflows (Del Ser, 2021).

In a similar vein, García Fernández (2022) recognized that, even if innovation labs evolve into something else or diffuse into other forms such as "storytelling, data or whatever department", they must exist in any case as part of the responsibility to the media outlet, to innovation, and, ultimately, to journalism.

According to González Alba (2021), even once the digital transformation of newsrooms has been definitively achieved, it will be necessary to stick to their commitment to this constant evolution, which can only be designed with a successful strategy of innovation and adaptation to change.

Valero-Pastor is not very certain about the future of labs because, in the United States, for example, there is no major media outlet that has them. From his perspective, it is possible that media labs will become product teams, following the trend of *El Confidencial*, whose new narratives lab transformed into a product and business model lab (Valero-Pastor, 2021).

In any case, even if they were to disappear as such, in the end, success would be that their spirit would permeate all levels of the newsroom, but especially the product team (or "research and development" as it is called in the United States), which is in charge of shaping the future:

> "really its spirit or its third-gear dedication would be infused into the product teams and, secondly, within the teams of new narratives, data journalism or machine learning; those types of departments that are more advanced in terms of format" (Valero-Pastor, 2021).

In a similar sense, Pedrero-Esteban pointed out that any big change begins with a small change that is cemented as the rest of the media outlet, structures, departments, and people see that it can be good:

> "this in ambiguous and abstract terms may not be an answer that applies to everyone, but I do believe in that this is the essence of it" (Pedrero-Esteban, 2021).

For Peña Martínez, from *RTVE*, labs do not have a good future because it is very difficult for managers to understand the benefits of having people "testing and testing and sometimes with no success". In his opinion, labs will go extinct, but

the work in newsrooms will be much more multidisciplinary, since more and more data analysts and computer scientists are needed to meet demands that are different from those of the rest of the workforce (Peña Martínez, 2021).

On the contrary, Zaragoza-Fuster believed that it is possible that the labs will go further. In this sense, he asserted that, despite not investing in the creation of labs, the media in Spain are investing in innovation: "little by little, they will realize that they need them and will incorporate them. Many work with data units, which are similar". From an international perspective, Zaragoza-Fuster believed that large media companies already have them, especially in the case of public media. In his opinion, it is therefore possible that they will proliferate as a strategy for competing when it comes to innovation. In similar terms, Espona, from *RTVE*, did not see a future without labs, while emphasizing the desirability of playing with technology while offering quality and journalistic information at the same time (Espona, 2021).

> Another group of interviewees believes that the future of labs depends on several factors, for example, on the media managers' vision and their ability to ascertain that it is a commitment that requires patience before they'll start seeing the fruits of their labor, and therefore, it cannot be short term (Rojas-Torrijos, 2021). In this regard, the author acknowledged the efforts of *RTVE*, *El País*, and groups such as *Unidad Editorial*, which has just created the *Expansión*LAB, as this shows that they seem to understand that innovation is the path to differentiation at a time when this is key in attracting highly fragmented audiences.

For Larrondo-Ureta, the future of labs also depends largely on how much or how little technology is implemented because

> "we are seeing that technology is once again emerging as a major factor owing to the advancement of artificial intelligence or immersive visualization techniques" (Larrondo-Ureta, 2021).

For other experts, their future greatly depends on the type of media outlet in each case. In Noguera-Vivo's opinion, in the case of young digital native media, for example, since they start out small, they already come with a generation of highly trained journalists, so that each of them is, in a way, "a small lab in itself", and therefore, they do not need to have a lab. In contrast, the big media outlets, those that come from print and the pre-internet era, have had to deal with budget cuts, the generational clash, the digital transition, and the technological transformation, and

> "obviously, those need a lab, they are using it and I think there is still a long way to go for the lab in many ways" (Noguera-Vivo, 2021).

The former director of the lab of the *Diario de Navarra* expressed a similar opinion:

> "My feeling is that innovation spaces are very relevant, especially in very traditional media. There are independent media, much smaller, many of them niche, which already have or are created with very agile DNA, very innovative, mainly in the digital field. For them it may be simpler. For the more traditional media, those with larger newsrooms, newsrooms that have a longer history with professionals with a certain degree of seniority, with practices closely related to the product, with print in many cases, with the history they bring, I think it will continue to be very important to have spaces where they can almost experiment with the start-up model and launch small or larger initiatives and transfer them" (Casares, 2021).

At this point, he cited *RTVE* and *El País* as good examples of large and prestigious media outlets that have to combine the demands of daily operations with the need to improve the quality of their journalism in terms of storytelling, technology, content, etc., and for this, they need constant testing. In these cases, Casares continued, "I have the feeling that they will continue to play an important role".

Finally, there are also interviewees who said that they do not know what the future holds for labs:

> "Well, this is a question I can't really answer because I have no idea if labs are going to be something that will still be around in a few years or if they're going to be something that will gradually come to an end. I like what he said, when I interviewed Alejandro Laso (...), he usually says that he would like for, in a few years, his media outlet's lab to disappear because it would no longer be necessary, because innovation would be in the DNA of all journalists, of all media professionals. I like to think that would be ideal, right? In a perfect world, media outlets could transmit, developing innovation at all levels and therefore the specific units, the labs would not be necessary because the DNA of innovation would be everywhere" (García-Avilés, 2021).

The professor of Journalism recognizes that this is utopian, but it's also a goal. To move toward it –he continued– it seems essential to work on the transfer of knowledge of the results of innovation to the media outlet as a whole.

In Cancela's opinion, it is difficult to predict the future of these spaces because, in times of crisis –such as the one currently facing both the media and journalism– their budget is the first to be cut:

> "Well, it's difficult, I don't see why they would cease to exist because they are necessary. There must be a space where the different disciplines can interact to continue advancing. So, it seems to me that they are necessary, but it is true that I would not risk making a prognosis because when you are in the media the first thing that gets cut are these types of spaces that do not produce money in the short term" (Cancela, 2021).

In this vein, Cancela stated that maintaining a lab is very difficult for the media because both the economy and politics "and many other things" are designed "only for the short term".

5. Discussion and conclusions

Labs are highly innovative internal management approaches that, in several cases, began as spaces for the creation of new narratives and, over time, have been transformed into product development laboratories. Other times, they have remained departments committed to the exploration and creation of interactive digital narratives, taking advantage of the possibilities generated by the evolution of the Internet itself.

At the same time, labs are places of experimentation that have appeared as a strategic response to the current situation that many media are dealing with today; they are experiencing a serious multifactorial crisis that urgently calls for new narratives, products, and services that meet the news needs of a consumer who has disconnected from the traditional media system and has opted to choose other ways of remaining informed.

In this context, it seems wise to have independent spaces in which to think, analyze, and test but –above all– in which to have enough time and perspective to design different solutions, a necessity that is impossible to achieve in the frenetic pace of day-to-day operations.

With respect to how labs contribute to innovation, the experts' answers were diverse but also complementary. It is noteworthy that they offer both new working methods to newsrooms and new formats for audiences, as well as tangible and intangible benefits for the media outlet. Tangible benefits include audience growth, increased loyalty, and the generation of new revenues through new channels. In terms of intangible benefits, the lab can increase the prestige and reputation of the media outlet by receiving awards, recognition, and distinctions.

Another contribution of the labs is that they are privileged spaces for innovation, understanding that this involves meeting needs and solving problems through creative solutions. By dedicating themselves exclusively to this, labs are also understood as a strategic response to a very real need experienced by the media today. Logically, this is subject to certain conditions, such as having data to ensure that the problems being solved are real and that these solutions are transferred. It is also convenient to have a very open communication channel with the audience because, the more you understand their needs, the better the lab's work will be. Innovation labs also offer a method to concretize the vision of journalism as a service, while at the same time, they are spaces in which to position a variety of roles, ask different questions, experiment, analyze what other media outlets do, analyze what the media outlet itself does, test, and end up making decisions.

These are very varied, and –since innovation is a multidimensional concept– they can affect distribution; monetization; metrics; technological, procedural, and technical issues related to software; applications; and platforms. Decisions made in the lab may also involve innovations in topics, coverage, approaches, formats, genres, narratives, task organization, and workflows.

As there are also several areas for innovation, decisions may also affect how to use ultra-localized data journalism or how to apply virtual reality, artificial intelligence, or facial recognition. For all this, the respite made possible by the lab is indispensable because the inertia is to do what is already known to "get it over with and move on".

In this sense, the results support the thesis that the organizational design for the production of daily products results in a "natural" orientation towards short-term exploitation that ends up engulfing the exploratory innovation referred to above. According to, for example, Porcu, Hermans and Broersma:

> "This lack of exploration does not come as a surprise, as newsrooms focus on the production of news on a daily basis. Hence, the organisational design for the output of daily products results in a 'natural' focus on the exploitative short term. But if left unbalanced by long term oriented exploration, the efficient and exploitative turns of the newsroom hamster wheel typically absorb most of people's creative energies, leaving nothing for explorative innovation" (**Porcu**; **Hermans**; **Broersma** , 2022).

However, the future of labs is uncertain. Respondents' answers were grouped among those who believe that there will be fewer, that there will be more, or that it depends on various factors, and those who directly stated that they do not know. The first group included experts who believed that, in the future, labs will be dispersed into new professional figures such as the head of product, head of visualization, chief data officer, audience manager, etc. We also place in this group those professionals who believed that, although the labs respond to a need in a space and time, the ideal is that they evolve in such a way that no one on the staff is robbed of having the same mentality as that which inspired the creation of the lab. We also include here those who believe that this is an idyllic vision that, in fact, does not correspond to what happens in practice, since newsrooms are excessively busy with day-to-day operations, something that –again in line with the approach of **Porcu**, **Hermans** and **Broersma** (2022)– takes too much energy.

> Innovation generated in the lab can affect organization, distribution, monetization, metrics, technological issues, and innovation in topics, coverage, approaches, formats, genres, and narratives

Another group of interviewees considered it possible that the existence of labs will "snowball" as media outlets realize that they need them and incorporate them as a differential strategy in the face of competition, and also in the face of the true fact –as the literature indicates– that exploratory innovation in traditional newsrooms is scarce and, therefore, very necessary (**O'Reilly**; **Tushman**, 2004; **Storsul**; **Krumsvik**, 2013; **Westlund**; **Lewis**, 2014; **Küng**, 2015; **Tameling**, 2015; **Fortunati**; **O'Sullivan**, 2019; **Porcu**, 2020) since, without exploration, the organization does not welcome or develop creative or new ideas. This can result in risk-averse organizations that are "trapped in suboptimal stable equilibria" (**March**, 1991, p. 71).

> The future of the labs is uncertain: on the one hand, the idea that the DNA of innovation can permeate the entire media outlet when there is no space specifically dedicated to designing, generating, and disseminating it seems utopian, but on the other hand, labs require specific funding whose return is not guaranteed, at least not in the short term

For a third group of interviewees, the future of labs depended on several factors. For example, the heads' vision, the greater or lesser level of technological implementation, and the type of media outlet being evaluated in each case. Since young digital-native media start out small, they already come with a generation of journalists with a high degree of digital training and culture, such that each one of them is, in a way, "a small lab". In contrast, the traditional media, which come from print, need a space in which to experiment to put in place and test different initiatives.

Finally, a fourth group of interviewees directly stated that they did not know what the future holds for labs, because this idea that the DNA of innovation can permeate the entire media outlet is, de facto, very complicated and somewhat utopian. In this sense, some of the interviewees agreed with the statement that news organizations are not very good at achieving exploratory innovation (**O'Reilly**; **Tushman**, 2004; **Storsul**; **Krumsvik**, 2013; **Tameling**, 2015; **Westlund**; **Lewis**, 2014), since daily news production, focused on short-term demand and efficient production, usually takes up most of people's creative energy (**Porcu**; **Hermans**; **Broersma**, 2020, p. 1423). However, as **March** (1991) and **O'Reilly** and **Tushman** (2013) point out, if organizations seek long-term survival, at least both types of innovation are needed.

On other occasions, doubts about their sustainability come from the –relatively common– practice of cutting the budget available to these units in times of crisis, such as the one we are experiencing today. Understandably, this danger seriously compromises the privileged space that labs offer to promote exploratory innovation, which, in a necessary "organizational ambidexterity" (**Maijanen**; **Virta**, 2017), is essential to ensure the survival of an institution, especially since, according to **Porcu**, **Hermans** and **Broersma** (2022), the focus on application seems attractive in the short term but may become "self-destructive" in the long run.

Moreover, the responses of the interviewees confirm that, despite the fact that the media labs of Spanish media outlets have been around for more than a decade, their configuration –that of those that survive– is elastic and, in many aspects, is still a work in progress. In any case, the superiority –and greater sustainability– of second-generation labs (**Hogh-Janovsky**; **Meier**, 2021) compared with first-generation labs is also noted.

The main limitation of our study is that it only focuses on the views of some of the most prominent experts in innovation labs in Spain. Although the results offer a view of interest in systematizing the discourse of qualified voices related to the object of study, the results cannot be generalized. Moreover, it comes in an unusually complex context, marked by the worldwide impact of the Covid-19 crisis, which, understandably, has not helped with the progressive consolidation of these areas.

As future lines of research, it would be interesting to broaden the focus to include the views of other experts in the Spanish field, such as those linked to the labs of the aforementioned media outlets in Peru and Argentina and, moreover, to also include the perspectives of the heads of some of the labs with the greatest activity in Europe and the United States to continue exploring to what extent they apply agile methodologies but also what difficulties they experience and what strategies have been most efficient in overcoming them. It would also be interesting to examine in depth why they decided to close those labs that have not continued their activity and to explore how to reverse these possible causes. With the goal of continuing to build knowledge, it could also be useful to continue working on the conceptualization of the interactive narratives generated in the labs and to examine the audience's preferences to foster an exploratory innovation that is capable of designing products and services that are better suited to their needs.

6. Notes

1. It is still active today. To learn more about the projects they are working on, you can check out their website at *https://www.afp.com/en/agency/medialab*

2. At the time we conducted the interview. Since December 2021, she has been Director of New Narratives and Audiovisual Formats at *Prisa Media*

3. For reasons of space, we include here the answers related to the object of study in this article. This article is part of Camilo Satizábal Idárraga's doctoral thesis entitled "Labs of media outlets as catalysts of journalistic innovation: concept,

situation in Spain, and view, of experts", defended in September 2022 at *Universidad Carlos III de Madrid* under the direction of Professor Susana Herrera-Damas.

4. Owing to the difficulties of carrying them out in person, we carried them out remotely in synchronous online mode through *Google Meet* or the platform preferred by the interviewee, who, in this case, sent the corresponding link.

5. In any case, all of them were quite satisfied with the version we sent them, with few adjustments in purely formal and expressive matters.

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