Say it to my face: Analysing hate speech against women on *Twitter*

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Abstract

The internet, and social media in particular, have become increasingly relevant as spaces for interaction and socialisation. The public sphere has shifted towards these platforms due their proliferation, uptake and the volume and intensity of the interactions they enable. In this apparently neutral virtual context, social media contribute to the construction or amplification of social relationships. The internet thus becomes a space of inequality where power relations and patriarchal practices are reproduced and amplified because of disinhibition deriving from anonymity. This paper analyses hate speech and misogyny in the *Twitter* conversations surrounding fifty Spanish women with a high profile both on- and offline in different professional fields: science, communication, culture, sports, business and politics. We performed an automated search for insults and hateful terms before analysing the direct interactions and indirect mentions that the women received on *Twitter* over the course of a year. The results of this study highlight the toxicity of the Twittersphere for female users: 15% of direct interactions and 10% of indirect interactions involving the women included some form of insult or abuse, although these were not necessarily sexist or misogynistic in nature. Women with greater visibility and social influence, such as those active in communication or politics, are most often targeted by this violence.

Keywords

Internet; Social networks; Social media; *Twitter*; Gender inequality; Hate speech; Sexism, Misogyny; Gender studies; Feminism; Content analysis; Public communication.

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1. Introduction

The internet has become a cornerstone of contemporary societies. Easy access and intense interaction have transformed online platforms into a space for socialisation, lending a performative character to their content and the relationships conducted through them.

Four decades ago, *The Cyborg Manifesto* (**Haraway**, 1984) paved the way for reflection around technology, gender and identity. In her essay, Dona Haraway criticised the dichotomies present in Western discourse (self/other, mind/body,

culture/nature, man/woman, etc.) as part of mechanisms of domination and explored how they could be challenged by technology. Countering patriarchal objectivity and essentialist feminism, Haraway advocated for the partiality of the cyborg: a fluid subject, neither person nor machine, who challenges gender categories and operates in a context where power has no set place and is constantly moving (**Romero-Sánchez**, 2014).

The Cyborg Manifesto marked a turning point in our understanding of gender and technology. In the early 1990s, scholars in cyberfeminism began to explore the internet's flexible, open character as an opportunity to subvert identities and engage in political action.

Cyberfeminism is imbued with techno-deterministic optimism, viewing technology as an intimate, subversive space for women (**Plant**, 1997). While Haraway acknowledged the power dynamics present in technology in her proposal of the cyborg as an ideal subject for women's political engagement, Sadie Plant –a leading author in cyberfeminism– championed the feminine essence of technology due to its origin and the relevance of characteristics such as connectivity and flow traditionally associated with women (**García-Aguilar**, 2007).

Adopting a similar stance, **Martínez-Collado** (1999) also viewed the web as a privileged space for designing the future and reworking relationships governed by identity, gender and sexuality. Despite these opportunities, however, **Wajcman** (2006) questioned whether technology was truly undergoing a sex change or whether the same inequalities were being reproduced in this new technological guise.

In recent years, the internet –and, more specifically, social media– has demonstrated significant potential for feminist action. The interactions and connections established through online platforms are energised by the real and mythical potential of technology (**Bonder**, 2002), enhancing their global visibility and relevance.

Using hashtags to organise online conversations has encouraged new forms of social mobilisation with the potential to reach a global audience through interactions and support from thousands of users around the world and even to move into the 'real world'.

The connectivity, speed and immediacy inherent to social media allow spontaneous communities to be created that aim to stand the test of time (**Cerva-Cerna**, 2020). Despite the speed and volatility of the conversation, these platforms are home to ephemeral communities (**Martínez-Rolán**; **Piñeiro-Otero**, 2017) and facilitate the development of networks based on common interests.

These networks contribute to the circulation of ideas, resources and behaviours. Their impact is both international, enhancing the visibility of people and ideas, and national, as this international recognition is used to exert pressure on established cultural and political boundaries (**Varela**, 2020). In this regard, women need to inhabit online spaces and own the technology if they are to build new gender relations (**Zafra**, 2011).

For **Molpeceres-Arnáiz** and **Filardo-Lamas** (2020), social media simultaneously reflect and produce social perceptions and evocations, giving rise to new mechanisms for transmission with diverse social and communicative functions. An example of this is *hashtag feminism* (**Dixon**, 2014), a form of feminism that appropriates *Twitter*'s labels and language form to cast light on the sex/gender-based discrimination and abuse experienced by women (**Thrift**, 2014; **Huntemann**, 2015; **Barker-Plummer**; **Barker-Plummer**, 2017) and develop a feminist awareness that extends into women's professional lives, as in #lasperiodistasparamos (womenjournalistsonstrike) (**Iranzo-Cabrera**, 2020).

#MeToo, #NiUnaMenos, #HermanaYoTeCreo, etc., are examples of hashtag feminism (**Dixon**, 2014) that have moved out of the virtual world to change the agenda and disrupt the social order; today they are memes –understood as cultural transmission units (**Rentschler**; **Thrift**, 2015)– of contemporary society.

Despite the transformative potential, immediacy, interconnectivity and influence of social media and their capacity to counter traditional hierarchies and propose new leaderships (**Bertomeu-Martínez**, 2019), the online environment remains a socio-technical product reflecting the social relations that produce and use it (**Wajcman**, 2006).

2. The internet as a space of inequality

The internet was initially hailed as a horizontal space that would disrupt patriarchal power relations, although this vision quickly proved to be entirely utopian (**Herring**, 1996).

The internet perpetuates offline inequality and violence as the patriarchal order moves into this space to harass women and render them invisible (**Ging**; **Siapera**, 2019). The technological possibilities of social media have radically increased the flow of antifeminist ideas and information between groups and platforms and across geographical borders (**Ging**, 2019). This cyberantifeminism, to use **Bonet-Martí**'s (2021) term, is characterised by extreme misogyny and a proclivity to personal attacks.

As a recent study by the *Pew Research Center* (**Vogels**, 2021) shows, women are three times more likely to be subjected to online sexual harassment, with percentages increasing in younger women (under 35). Sexism and misogyny cast a long shadow in the online world (**Fox**; **Tang**, 2014), with one in two women suffering some form of gender-based online harassment (**Vogels**, 2021).

The expansion of social media has bolstered hate speech against women as a vehicle for different forms of gender-based sexual, psychological or even femicidal violence (**Vega-Montiel**, 2019). Online violence against women can take the form of harassment, stalking, extortion and threats, identity theft, doxing and unauthorised manipulation or publication of pictures (**Engler**, 2017).

These types of violence are neither random nor coincidental; instead, they display specific patterns rooted in the andro-centrism present in hegemonic culture and in the online world, its codes and behaviours (**Villar-Aguilés**; **Pecourt-Gracia**, 2021; **Nagle**, 2018; **Nussbaum**, 2010).

As well as becoming hostile spaces for women purely because they are women (**Bertomeu-Martínez**, 2019), social media platforms have also fostered new, virulent forms of sexism such as gendertrolling.

While trolling involves aggressively seeking entertainment by provoking an emotional reaction in victims (**Phillips**, 2012), gendertrolling frequently expresses the perpetrator's sincere beliefs, making it more violent and destructive (**Mantilla**, 2013). According to **Mantilla** (2013), some of the characteristics that make gendertrolling more vicious are:

- participation by several individuals, often coordinated;
- sex/gender-related insults and comments;
- violent language that may be described as hate speech;
- credible threats that transcend the online world;
- intensity, scope and unusual persistence of the attacks;
- particularly strong reactions to mentions of sexism or gender-based inequality.

These practices are mediated by the prevalence of social media within society, enhancing visibility and participation, and by the perpetrators' anonymity and impunity (**Vega-Montiel**, 2019; **Fox**; **Cruz**; **Lee**, 2015).

To explain the impact of anonymity among users, **Suler** (2004) suggested the term "disinhibition effect" to describe how certain factors in online environments (e.g. invisibility, asynchronicity, minimising authority) encourage people to conduct themselves in ways that would be unthinkable in offline contexts. While this disinhibition effect is not negative in itself, its interactions with the environmental sexism (**Glomb** *et al*., 1997) that is already present on social media has a negative impact on users, whether or not they are directly targeted by harassment and violence.

Sexism on social media is not always hostile towards women; it can also be expressed humorously (**Frenda** *et al.*, 2018b) through memes (**Drakett**, 2018) or hashtags (**Fox**; **Cruz**; **Lee**, 2015), or even through praise or apparently positive comments. These manifestations of benevolent sexism (**Glick**; **Fiske**, 1996) contribute to strengthening power relations, gender stereotypes and sexist behaviours (**Marwick**, 2013).

Hate speech against women – understood as advocating, promoting or inciting denigration, hatred or vilification of a woman or group of women in any form, as well as harassment, insults, negative stereotyping, stigmatisation or threats and the justification of these forms of expression on the grounds of sex or gender (*ECRI*, 2015) –is embedded in traditional customs and, as such, can go unnoticed, thus nurturing inequality. According to **Frenda** *et al*. (2019), the backdrop for this form of hate speech, which varies in type and severity (*Anti-Defamation League*, 2018), is sexism and misogyny, which they view as two interrelated aspects that underpin and perpetuate patriarchal social relations (**Manne**, 2017).

In other words, antifeminism is the driving force behind hate speech against women. Besides supporting sexism and adopting a sexist, misogynistic discourse, antifeminism has its own unique characteristics: its origin as a countermovement, its discursive sophistication, its capacity to evolve and adapt, and its constant opposition to feminist demands and statements (**Bonet-Martí**, 2021, p. 62). Although this phenomenon is not new, **Bonet-Martí** (2021) shows how it has been disseminated by "male supremacist" websites and forums, and even on general platforms, with the objective of transforming social media into a hostile space for feminist expression.

3. *Twitter* as a space of toxicity

In recent years, hate speech against women has grown exponentially on mass platforms such as Facebook and especially *Twitter*, due to its public nature and easy anonymity (**Hewitt**; **Tiropanis**; **Bokhove**, 2016; **Poland**, 2016).

Spaces such as 4chan and forocoches in Spain have become home to the manosphere, defined as an expanding online masculine subculture that insults, defames and attacks women simply for being women (**Nagle**, 2017; **Lyons**, 2017; **Bertomeu-Martínez**, 2019). **Jane** (2017) notes that the manosphere cannot be contained or situated, as it is constantly expanding in any online space that may pose a threat to masculine privilege to perverse effect.

Therefore, despite the fact that *Twitter* has fostered feminist communication and action (**Baer**, 2016; **Dixon**, 2014) by promoting the creation of useful groups (**Larrondo-Ureta**; **Orbegozo-Terradillos**, 2020) around common ideas and objectives that result from convergences and interactions between the individual and the collective (**Juris**, 2012; **Zafra**, 2011), the platform has become a hostile space for women.

As well as criticisms of its neoliberal nature (**Portwood-Stacer**; **Berridge**, 2014) and market bias (**Gunn**, 2015),

> *Twitter* is a toxic terrain for women

which perpetuate power relations and exclusion, interactions in this microblogging network have also been deemed to endorse antifeminist discourse (**Bonet-Martí**, 2020) in the public sphere.

> Journalists and politicians are the object of increased hostility in the tweetosphere

Studies such as **Frenda** *et al*. (2019), **Fox**, **Cruz** and **Lee** (2015), and **Murphy** (2013), among others, have demonstrated the toxicity of *Twitter* for women. Under the cloak of anonymity, deprecating comments and violent misogynistic action are common and these practices are amplified and reinforced by the social platform's visibility. Thus, *Twitter* has become one of the manosphere's preferred tools. The unique characteristics of the platform have encouraged individuals and groups to gather via "polarising tropes" (**Ging**, 2019) that are granted visibility and feedback through hashtags.

The communities that emerge around a hashtag are self-defined by the discourse surrounding it, engaging in support and dissemination activities that reinforce their ad hoc nature (**Golbeck**; **Ash**; **Cabrera**, 2017) and manifesting shared feelings and positions that disrupt the dichotomy between the online and offline worlds as two independent, separate realities.

In this regard, **Fox**, **Cruz** and **Lee** (2015) studied hashtags as conversation triggers and ways of bringing together misogynistic conversations supporting existing stereotypes (#LiesToldByFemales and #IHateFemalesWho) and hostility, violence and repression (#WhatBitchesDo). This hostility is more acute in some professions, such as women politicians or journalists, as part of a power struggle where hateful ideology, misogyny and fake narratives converge (**Ferrier**, 2018; **Cuthbertson** *et al.*, 2019).

As an extension of the public space, social practices and structures, *Twitter* has aroused interest among researchers. Studies such as **Frenda** *et al*. (2019) or **Jha** and **Mamidi** (2017) have focused on the platform to analyse sexist hate speech.

Leaving aside the debate as to whether sexism and misogyny are two distinct phenomena (**Manne**, 2017) or whether the latter is a component of hate speech (**Richardson-Self**, 2018), both may be viewed as language-based manifestations of the male domination imposed by the patriarchal order, intersecting with other forms of inequality (**Waseem**; **Hovy**, 2016).

If, as Christina **Hanhardt** posits in *Safe Space* (2013), the struggle for collective safety requires a deeper analysis of who or what is a threat and why, knowledge of the practices that make the Twittersphere a toxic space for women is vital.

This study analyses the conversation surrounding female *Twitter* users whose activities in a variety of fields (sports, communication, politics, culture, science and business) lend them greater visibility both on and offline in order to identify offensive terms related to hate speech and misogyny in these interactions.

Our objective echoes studies such as **Hewitt**, **Tiropanis** y **Bokhove** (2016), who analyzed misogyny on *Twitter* by conducting a manual search of offensive terms; the *Automatic misogyny identification* (*AMI*) by **Fersini**, **Nozza** and **Rosso** (2018), and **Fersini**, **Rosso** and **Anzovino** (2018), an important starting point for other automated analyses of this phenomenon; and the works of **Pamungkas** *et al*. (2018a; 2018b), which exposed the limitations of automated detection of sexism and misogyny on social media. **Frenda** *et al.* (2018a) suggest a complex method incorporating words associated with sexuality, femininity and the body, insults, hashtags, acronyms and sentiment analysis, covering the Spanish language (**Frenda**; **Ghanem**; **Montes-y-Gómez**, 2018).

More recently, **Pamungkas**, **Basile** and **Patti** (2020) conducted a computational multilingual study to enable a more accurate conceptualisation of misogyny and its relationship with other abusive and sexist phenomena, combining a tweet count with style, wording and other deep learning features to retrieve and analyse the data.

In our study, we focused on the female users' replies, quotes and mentions both on and off social media to answer the following research questions: How is hate speech expressed in the online conversation around prominent women? Does the presence of hate speech affect these women's professional lives?

Our initial hypothesis is that the public profile of these female users makes them a target for hostility (H1). With regard to manifestations of hostility, we worked on the hypothesis (H2) that insults and other derogatory terms have a strong sexist and misogynistic character, (H3) that they are more frequent and virulent in indirect mentions (those that do not involve the female user) and (H4) that they affect women in sports, journalism and politics more severely due to their higher public profile.

As well as identifying the prevalence of insults and other derogatory language in the conversation surrounding these prominent women (O1), our research objectives were: (O2) to identify the most widely used offensive terms and to determine those marked by sex/gender; (O3) to analyse how they are manifested online and (O4) to determine which professional spheres trigger the greatest hostility in the Twittersphere.

4. Materials and methods

In order to explore manifestations of sexist hate speech and misogyny on *Twitter*, we performed a content analysis of the conversation surrounding prominent women using key words in the text and tags used in those interactions.

As our experience of the world is mediated by language and language is both functional and performative (**Rapley**, 2014), an analysis of the most widely used negative expressions in the conversation –both with and about the women in the sample– provides a reference framework for how women are perceived and treated on *Twitter*.

With this in mind, we selected 50 female *Twitter* users who are prominent in public life both on and offline at the state (Spain), regional (Galicia) and local (Pontevedra province) level in six fields or categories:

– Sports: a selection of well-known women in the sports world, in terms of both competitions and achievements (Olympics, international competitions and other relevant tournaments) and media impact. The ten women users in the sample are: Teresa Portela, Saleta Castro, Susana Rodríguez Gacio, Támara Echegoyen Domínguez, Alessandra Aguilar, Ana Peleteiro, Chus Lago, Vero Boquete, Lidia Valentín, and Mireia Belmonte.

– Politics: women politicians with leading positions in political parties and/or in state, regional and local government (focusing on Galicia and Pontevedra). We strived to include women of different political leanings in the sample to avoid party or ideological biases. The nine women users in the sample are: Ana Pastor Julián, Carmela Silva, Cayetana Álvarez, María Ramallo, Yolanda Díaz, Carmen Calvo, Anabel Gulías, Ana Pontón, and Inés Arrimadas.

– Communication: women journalists working in conventional media or social media (influencers). As in the category of women politicians, the sample included several local (Galician) professionals and a diverse range of media outlets. The eleven women users in the sample are: María Jose Porteiro, Alexandra Pereira, Natalia Maquieira, Silvia García, Carlota Núñez, Silvia Jato, Sonsoles Ónega, Julia Otero, Lara Graña, Ana Pastor, and María Obelleiro.

– Science: this category includes several women in the field of science, technology and academia. We included women who are renowned for their contributions to science and technology, as well as women who have made outstanding academic contributions in fields such as gender and feminism. The seven women users in the sample are: Marisol Soengas, Vanessa Valdiglesias, Elena Vázquez Cendón, Isabel Pastoriza, Ofelia Rey Castelao, Clara Grima and Rosa Sansegundo.

– Culture: prominent women in several cultural areas, such as literature, graphic and audiovisual media, art, etc. The eight women users in the sample are: Ledicia Costas, María Castro, Celia Freijeiro, Marta Larralde, Marga Doval, Paula Cabaleiro, Margarita Ledo, and Maria Hesse.

– Business: a selection of women from private companies and the banking sector. The five women users in the sample are: Susana Pérez Iglesias, Lucía Pedroso, Carla Reyes, Teresa Díaz Faes, and Ana Botín.

The sample includes women with different stances on feminism, including those who have expressed no particular stance.

The unequal numbers in the final sample for each professional field is due to the women's visibility and to our attempts to include women users from different levels (state-regional-local) and contexts (party, media, specialisation, etc.).

Once the categories and participants had been selected, we gathered our sample of posts. To understand the extent to which these prominent women are subjected to hostility by users, we adopted a comprehensive approach to their social conversations by analysing posts by the women themselves, direct replies (or mentions) and indirect replies (speaking about the women without citing their user name).

For the purposes of this analysis, we limited the study period to one year, with tweets posted by the women and their communities from 1st October 2019 to 1st October 2020. Although this limited time frame owes to organisational constraints, it must also be understood in the context of a progressive rise in online harassment and violence against women, as 'The state of online harassment' by the *Pew Research Center* (**Vogels**, 2021) and the sector-based reports 'Ontheline' by the *International Press Institute* (*IPI*, 2018) focusing on journalism in Spain and 'Online violence against women journalists: a global snapshot of incidence and impacts' by *Unesco* (**Posetti** *et al.*, 2020) have shown, as well as an increase in academic research on the subject.

Data scraping was carried out using *Graphext* software, with the following search settings:

– Direct interactions: women users directly addressed in a reply to one of their tweets or mentioned (quoting the woman's *Twitter* profile name) in another conversation. The search excludes retweets.
– Indirect mentions: using users' names and surnames without specific reference to their *Twitter* account (does not include replies or quote tweets). Retweets are excluded.

These limitations and search parameters allowed a total of 511,587 tweets to be retrieved: 302,790 direct interactions and 200,797 indirect mentions of the women on *Twitter*.

The sample selection process used in this study employs two new aspects when compared to prior research on hate speech and misogyny on *Twitter*: the focus is on the social conversation surrounding prominent women in different professional contexts, helping to identify fields that are more susceptible to this type of violence, and indirect mentions (the equivalent of speaking behind someone's back) are included, helping to identify trends in hateful language, sexism and misogyny in the online world.

Table 1. Profiles per category and field and volume of tweets in the sample

Category	Number of women	Direct interactions	Indirect mentions	Total tweets per category
Sports	10	6,704	4,627	15,575
Politics	9	182,119	155,686	356,667
Communication	11	66,123	37,372	116,437
Science	7	25,104	632	36,320
Culture	8	4,826	3,264	12,652
Business	5	5,727	7,216	14,979
Total	50	290,603	208,797	540,443

Once the sample had been selected and the data gathered, we prepared a list of insults and other negative expressions to automate the content analysis due to the very high volume of posts. We used the terms proposed by **Torres-Ugarte** (2017), creator of a website that measures the volume of hatred generated on *Twitter* in real time.
https://www.odiometro.es

Using the data available on the project's website, an initial list of 238 expressions was collated, including swear words and insults.

The list was later expanded and adapted due to its androcentric nature, using the lexicon developed by **Fasoli**, **Carnaghi** and **Paladino** (2015), which has been used in other studies of sexism and misogyny on *Twitter*. During this process, male-specific terms and insults were eliminated and offensive terms targeting women were added. We decided to include Galician language variants as this was the geographic area of reference for some of the women in the sample.

This process yielded 204 'hateful' terms found to varying degrees in the social conversation. This bilingual repertoire forms part of the innovative contribution of our study and helped automate searches and retrieve tweets, albeit with some manual intervention to merge analogous terms or variants.

5. Results

Our analysis of the social conversation surrounding the 50 women selected on *Twitter* revealed the presence of two interrelated realities: hostility towards women on the Twittersphere and its uneven impact depending on the woman's professional field. These two findings enabled us to produce a snapshot of hate speech against women on *Twitter*.

5.1. Insults and other abuse

By automating keywords in the text and tags, we were able to identify a total of 62,560 insults and other abusive terms. 12.8% of the tweets directly or indirectly addressed to the women included an offensive term, although these manifestations of hate speech were particularly apparent in direct mentions.

Out of the 290,603 tweets replying to posts by these 50 women or addressing them in mentions, 42,384 were insults or other unpleasant expressions, representing 15% of all direct mentions.

With regard to indirect mentions (n=208,797), i.e. messages about the women (name and surname) without mentioning their user name, a total of 20,176 were offensive, i.e. 10% of direct mentions.

If we were to extrapolate this situation to the offline world, we would see that the *Twitter* user community is more likely to insult women to their faces (15% of offensive terms) than behind their backs (10%), increasing the visibility of the attacks among stable user communities (followers) and casual communities (those who randomly participate in the conversation at some point).

5.2. Distribution by professional background

Although insults and other abuse were observed in all categories, there were significant differences in terms of incidence and distribution.

Table 2. Volume of direct and indirect insults per category as a proportion of the total tweet count

	Category						
Insults	Sports	Politics	Communication	Science	Culture	Business	Total
Direct interactions	280	32,779	8,047	707	118	453	42,384
% of total tweets	0.1%	11.3%	2.8%	0.2%	0.0%	0.2%	14.6%
Indirect mentions	95	15,149	4,305	12	86	529	20,176
% of total tweets	0.0%	7.2%	2.1%	0.0%	0.0%	0.3%	9.6%
No. of insults	375	47,928	12,352	719	204	982	62,560
% of total tweets	0.1%	9.8%	2.5%	0.1%	0.0%	0.2%	12.8%

While tweets containing hateful words addressed or referring to women in culture, sports, science and business numbered fewer than 1,000 (less than 0.2%), those in communication were the target of 2.5% of the insults in the sample (a total of 12,352) –this percentage was quadrupled in the case of women in politics, who were the target of 9.8% of the abuse (47,928 insults or other abusive terms).

> Hate speech against women is especially evident in direct interactions, which results in its harmful nature

The fact that the women in communication and politics were the target of 90% of the insults recorded in the sample indicates that there is greater hostility on *Twitter* towards participation by women in fields with a higher public profile. The frequency of these attacks against women politicians averages 15 negative interactions per day, with a potentially negative impact on their professional and personal lives.

By considering the way hate speech is expressed, we can observe different behaviours depending on women's professional field. In communication and politics, hostility was higher, with twice as many direct interactions as indirect mentions. In the case of women in business and finance, the situation was reversed, with most insults expressed through indirect mentions. This situation could be explained by these women's higher offline profile, which may lead users to project their hatred online without bothering to check whether or not their target has a profile on the platform.

5.3. Most frequent insults and abuse

An analysis of hate speech via abusive language reveals the most frequently used expressions in the online conversation with or about the women in the sample.

Twenty of the 204 insults and offensive terms selected for our search in Galician and Spanish appeared in the sample more than 1,000 times. These 20 terms represent 9% of the words analysed and appear more than 43,153 times (70% of the sample of expressions linked to hate speech), a similar percentage to the Pareto Principle.

Table 3. The most frequent insults and abuse in the sample

Term	Science	Communication	Culture	Sports	Business	Politics	Total
mierda	249	1,488	69	75	165	4,473	6,519
fascista	50	1,097	13	108	41	4,198	5,507
asesina	5	498	50	4	21	2,025	2,603
criminal	7	455	2	3	33	1,986	2,486
terrorista	1	308	0	3	23	2,051	2,386
facha	33	854	7	15	48	2,346	3,303
ruin	10	202	5	4	123	1,873	2,217
miserable	10	414	0	1	28	1,740	2,193
nazi	21	417	1	17	75	1,408	1,939
basura	27	585	7	7	36	1,030	1,692
golpista	0	222	0	0	6	1,428	1,656
cómplice	6	336	1	1	14	1,187	1,545
falsa	23	521	3	5	20	818	1,390
cobarde	2	197	1	1	13	1,068	1,282
hipócrita	2	221	1	10	11	940	1,185
etarra	2	120	0	10	16	975	1,123
tonta	18	181	2	3	9	850	1,063
indigna	16	262	7	2	18	749	1,054
gentuza	11	226	1	2	11	758	1,009
delincuente	1	154	1	2	13	830	1,001

The most repeated term in the sample of posts was "mierda" (shit), including variants in Spanish and Galician and related expressions such as "vete a la mierda" (lit. "go to shit", go to hell) or "de mierda" (lit. "of shit", fucking). See the Annex.

Other insults included the term "fascista" (fascist), an insult commonly directed at women. This derogatory term is devoid of any actual meaning, as it is widely used for women in different fields with different ideological backgrounds.

The incidence of these two expressions in the sample was quite high; they were present in one in four posts including abusive language.

However, sexist or misogynistic insults and abuse were not so common, appearing in less than 1% of the sample.

Table 4. Sexist / misogynistic insults most frequently observed in the sample

Term	Science	Communication	Culture	Sports	Business	Politics	Total
hija de puta (and variants)	5	109	2	6	13	389	524
feminazi	7	118	1	5	14	364	509
golfa	1	16	0	0	0	79	96
zorra	0	15	0	0	3	78	96
puerca /cerda	12	11	2	3	2	26	56
mal follada (and variants)	0	5	0	0	0	15	20

The most commonly used sexist insult in the sample was "feminazi". This term has become popular online as part of gendertrolling –a clear backlash against feminism gaining ground or women having a voice (or writing a tweet).

With regard to the remaining sexist insults, their presence in the sample is low in terms of frequency (0.1% or less) and they are part of expressions that mainly target women politicians and journalists.

These insults all have overt or covert sexual undertones. The female forms of some animal names –zorra (lit. "female fox", slut), cerda/puerca (lit. "sow", dirty, also sexually)– are also used as insults, whereas the masculine form is devoid of such connotations.

The expression "hija de puta" (lit. "daughter of a bitch") and variants (hijaputa, japuta, hdp, hdlgp, hp, hija de la gran puta, hija de…) merit particular attention due to their frequency –524 instances– and the implicit sexism of the term, even when it is not intended to be abusive (just as the English expression "son of a bitch" is not always insulting).

Several trends in the terms used in different posting methods emerged. While expressions such as "mierda" or insults such as "Nazi" appeared in similar numbers in direct interactions and indirect mentions, others such as "asesina" (murderer) (2nd in direct interactions and 4th in indirect mentions), "criminal" (3rd and 6th) or "ruin" (despicable) (5th and 10th) were more frequent in the social conversation with women on *Twitter*.

Table 5. Insults and abuse present in direct interactions with women by professional category

Term	Science	Communication	Culture	Sports	Business	Politics	Total
fascista	50	722	13	98	0	2,520	3,403
asesina	5	301	0	1	12	1,623	1,942
criminal	7	272	1	3	12	1,538	1,833
mierda	69	393	16	17	46	1,100	1,641
ruin	8	147	4	3	72	1,403	1,637
miserable	10	261	0	1	16	1,296	1,584
nazi	15	297	1	13	58	912	1,296
terrorista	1	212	0	3	13	1,050	1,279
basura	27	408	7	7	17	748	1,214
facha	22	326	5	9	4	848	1,214

If we consider insults in indirect interactions, the presence of terms such as "terrorista" (2nd in indirect and 8th in direct interactions) and "facha" (3rd and 9th) is more pronounced.

Table 6. Insults in indirect interactions by professional category

Term	Science	Communication	Culture	Sports	Business	Politics	Total
fascista	0	375	0	10	41	1,678	2,104
terrorista	0	96	0	0	10	1,001	1,107
facha	0	275	0	1	27	765	1,068
mierda	0	237	4	15	49	660	965
asesina	0	197	50	3	9	402	661
criminal	0	183	1	0	21	448	653
nazi	6	120	0	4	17	496	643
golpista	0	102	0	0	3	512	617
miserable	0	153	0	0	12	444	609
ruin	2	55	1	1	51	470	580

Generally speaking, direct insults seem to be stronger with clearer derogatory intent. This aspect should be analysed in conjunction with the quantitative dimension: insults were more often aimed directly at the women than indirectly.

Lastly, we analysed sexist insults towards the women in the sample by origin, either direct interactions or indirect mentions.

Table 7. Sexist / misogynistic insults by type of utterance

Term	Direct interactions	Indirect mentions
feminazi	333	176
hija de puta (variants)	327	197
zorra	37	59

Analysing the extent to which this hate speech was openly expressed by considering the type of interaction, we found once again that sexist insults appeared more often in direct interactions (mentions and replies to tweets). These types of offensive expressions appeared more than twice as often in direct interactions as in indirect mentions, with the exception of "zorra", which was more widely used in indirect interactions.

In the sample, this insult tends to refer to the target indirectly, appearing in derogatory tweets that do not mention the user and are therefore invisible to any woman being attacked and to her direct community.

6. Discussion and conclusions

Twitter has proven to be hostile territory for women, echoing previous studies such as **Frenda** *et al.* (2019) and **Fox**, **Cruz** and **Lee** (2015). More than one in ten tweets directed to/about the women in the sample include insults or other derogatory terms; these figures are in line with those found by **Şahi**, **Kılıç** and **Sağlam** (2018) in the Turkish Twittersphere.

This hostility becomes more patent when we understand how it is exercised. The fact that 15% of the hate speech interactions in our sample occurred through direct interactions, letting the women know they are being attacked, is in itself a form of aggression. This phenomenon may be explained by anonymity and the disinhibition effect described by **Suler** (2004), as well as by passivity among users, which merits further consideration, although it could be explained by **Glomb** *et al.*'s (1997) theory of environmental sexism.

As well as letting the victims know they are being attacked, quoting the user name raises the visibility of these attacks in women's communities, with no consequences for the perpetrators.

The toxicity of this environment and fear of retaliation in response to any opposition are potent inhibitors for users and for the women themselves, standing in stark contrast to the perpetrators' impunity. Shielded by anonymity and the lax response from social media managers to reports of these behaviours, perpetrators use more vicious, derogatory language in direct interactions with women users than in indirect mentions. The presence of greater violence in direct replies and interactions is one of the main findings of our study and must be understood in the context of antifeminism and misogyny, where activism has shifted towards more personalised attacks, as **Ging** (2019) explains.

With regard to the women *Twitter* users' professional fields, women in communication and especially politics experience a particularly toxic environment. These fields have a very high public profile and play an essential role in democratic societies.

The increased hostility towards these professions in the Twittersphere should be understood in the context of a new antifeminist online discourse. According to **Lamoreux** and **Dupuis-Déri** (2015), this discourse opposes ideas and people who strive for equality and women's emancipation. **Bonet-Martí** (2020) highlights the increasingly aggressive nature of this discourse.

The lower incidence of hate speech in areas such as sport must be understood in this light. The fact that women in this field of great violence and gender inequality in the offline world received only 0.1% of the insults in our sample suggests that these insults are used as a mechanism for repression.

Hate speech is part of the daily routine for women politicians and communicators; these abusive practices are intended to silence them or limit their activities, as **Ferrier** (2018) points out. In the words of Virginia Pérez Alonso, chief editor of the Spanish daily newspaper *Público*,

> "This is a society in which female voices are heard less than male voices because power structures are mainly in the hands of men. These structures are very difficult for us women to access and to be heard in. If at this point, on top of it all, women become reluctant to make comments or to publish our information, we are depriving citizens of other voices" (*IPI*, 2018: *Consecuencias del acoso online a mujeres periodistas*, paragraph 2).

As **Cerva-Cena** (2020) states, harassment and hate speech are the price women have to pay to express themselves.

The particular targeting of abusive language towards these professionals must be understood as part of gendertrolling due to the involvement of multiple users, the way in which insults and aggressive language are used, the intensity of the attacks and the reactivity to the expression of concerns regarding inequality (**Mantilla**, 2013).

> The term 'feminazi' has great importance on the Internet within the practices of gendertrolling

As for the type of insults and other abuse, gender neutral terms were found to be more common in our sample. Although the Twittersphere uses and abuses a small number of offensive terms, the most commonly used words closely reflect **Torres Ugarte's** (2017) *odiómetro*, with a lexicon marked by sexism and misogyny proposed by **Fasoli**, **Carnaghi** and **Paladino** (2015).

> Areas such as sports, with great inequality and violence in real life, have an incidence of testimonial hate speech

Insults marked by sex/gender are only sporadically present, with the exception of "feminazi", a term first used by US radio personality Rush Limbaugh during the antifeminist backlash in the 1990s, which has become notorious in gender-trolling and other manifestations of online hate speech as a derogatory term for

> "a committed feminist or a strong-willed woman" (*Oxford dictionary of American political slang*, in **Villar-Aguilés**; **Pecourt-Gracia**, 2021).

As **Ging** (2019) indicates, the use of this term, adapted to the writing style of different countries, has become a descriptor for women in the manosphere and is now ubiquitous in on and offline social interaction. Slogans such as "STOP feminazis" frame and structure antifeminist discourses both online and in real life. Online, **Villar-Aguilés** and **Pecour** (2021) identified a dense network of microdiscourses that disseminate different forms of violence. In real life, harassment and other attacks against women who have drawn media attention for speaking out against patriarchal violence have become common: this is the case of Juana Rivas, analysed by **Bernal-Triviño** (2019), and, more recently, Rocío Carrasco (*La Vanguardia*, 2021) in Spain.

Despite the lower frequency and variety of sexist/misogynistic terms, misogyny must be mentioned in any discussion of the online conversation with/about prominent women. If, as **Lagarde-y-De-los-Ríos** (2012) claims, misogyny is the belief in women's inferiority and their use, aggression and subjection on patriarchal grounds, hate speech and general toxicity towards women on *Twitter* and other platforms must be seen as part of this setting. In this context, for **Risam** (2015), to take a utopian vision of the internet is to adopt a toxic discourse per se.

The harassment targeting women [especially in communication and politics on *Twitter*, as corroborated by **Ferrier** (2018), **Rego** (2018), **Southern** and **Harmer** (2019), and **Fuchs** and **Schäfer** (2019)] requires measures to raise awareness and to demonstrate that this is not a matter of individual problems or personal experiences but a collective issue requiring action to be taken to bring it to an end. This hostility has expanded and now permeates the political discourse.

Social media platforms have fostered action and mobilisation to such an extent that authors such as **Iranzo-Cabrera** (2020) view them as part of a new feminist wave. Nevertheless, the toxicity faced by women in virtual platforms and communities must be urgently tackled.

According to **Bonet-Martí** (2021), two main approaches are needed: on the one hand, stopping rumours and fake news, and on the other, taking action against growing cyber-violence.

Institutions such as the *International Press Institute* (2018) and *Trollbusters* (*Trollbusters*, n.d.; **Ferrier**, 2021) have published recommendations to stop the harassment of women journalists on and offline. Self-protection practices are also useful to build a safer context for individual women users, but they do not offer a solution to the overarching problem. In the case of hate speech on *Twitter*, self-protection measures include limiting direct messages, replies and even self-censorship or self-exclusion. These measures limit the platform's communicative and interactive potential for female users, who continue to be exposed to violence through indirect mentions.

The prevalence of insults and abuse found in our study points to the need for stronger control of hate speech and misogyny on these platforms. As a company whose mission is to facilitate communication, *Twitter* must implement measures to contribute to the

https://ipi.media/medidas-contra-el-acoso-online-en-las-redacciones-espana

early detection of this type of hate speech and improve its mechanisms for taking action against toxic users, both actively (when a complaint is made) and passively.

> This violence against women, carried out in the tweetosphere, has a repressive effect

When we completed this article in May 2021, *Twitter* had just announced the launch of an experimental feature (for *iOS* and *Android* devices) to warn users against including offensive content in their messages before posting, inviting them to review their posts. Besides detecting sensitive terms, the app must consider the context and familiarity of profiles when issuing warnings (**Butler**; **Parrella**, 2021).

Although any such measure is a positive step forward and its efficacy remains to be seen, greater commitment to cutting hate speech and other forms of violence in the Twittersphere is required from the platform. The app's efficacy depends entirely on user engagement: this measure could have a positive impact by raising awareness of the impact of people's utterances on others, but it could be completely useless in the case of toxic users or *machitroles*, a popular Spanish term for sexist trolls (**Martínez-Jiménez**; **Zurbano-Berenguer**, 2019).

Twitter's role as the platform managing these conversations must go further and the app's algorithm must be used to detect profiles with the highest numbers of warnings and take precautionary measures such as suspending accounts. Efficient, timely management of user complaints could also help stop the problem to some extent.

Artificial intelligence offers many opportunities for preventive and reactive action against hate speech and other types of online violence against women. However, social media managers declare themselves reluctant to use it for reasons of freedom of speech. In this context, other organisations, public authorities and/or social movements can work together to develop algorithms that detect and respond to violence and toxicity against women. Work on automated detection of sexist and misogynistic discourse continues, offering exceptional tools to develop these mechanisms, which would only be reactive but could enable an immediate response to each toxic post.

More efficient mechanisms for legal protection against hate crime must also be implemented, as the time required for legal procedures, resistance to changing the law and the global nature of social media (albeit with a local impact) leads to less efficient responses. However, such a response is necessary to end the impunity of the perpetrators, while other measures such as creating neural networks with a greater capacity to take action and adapt to an evolving situation are also needed.

From the perspective of prevention, other potential action could include fostering public/private cooperation with codes of good practices and adherence by the public authorities and other organisations, especially social media platforms and other online services, to these codes.

The normalisation of hate speech against women and its sociocultural roots means that public authorities and social media managers must act to bring an end to the phenomenon, but so must (e-)citizens. Participation and adherence by social groups, professional bodies and individuals to a code of conduct and dissemination of these codes can raise awareness and provide tools to tackle this violence.

Without resorting to the utopian optimism espoused by cyberfeminists, the internet offers excellent opportunities and tools to subvert hate speech and other forms of online violence. This has been demonstrated by initiatives such as *Paritybot* (**Cuthbertson** *et al.*, 2019) and *Amnesty International's Troll Patrol* (**Delisle** *et al*., 2019), which have used bots and trolls, more typically used in gender-trolling, as a small-scale antidote to online toxicity.

> Most expressions of hate speech are sexually neutral but can be considered misogynistic manifestations as they focus on and attack women

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8. Annex

Terms in the sample

Spanish	**English**
Asesina	Murderer (f.)
Basura	Rubbish/Trash
Cobarde	Coward
Cómplice	Accomplice
Criminal	Criminal
Delincuente	Criminal
Etarra	ETA supporter
Facha	Fascist
Falsa	Dishonest (f.)
Fascista	Fascist
Feminazi	Feminazi
Gentuza	Scum
Golfa	Bitch/Slut
Golpista	Participant in a coup d’état
Hija de puta	Lit. daughter of a bitch
Hipócrita	Hypocrite
Mal follada	Lit. woman who has not been properly fucked (irritating woman who is not submissive and needs to be “set straight”).
Mierda	Shit
Miserable	Mean-spirited
Nazi	Nazi
Puerca/Cerda	Lit. sow (dirty, also in the sexual sense)
Ruin	Despicable
Terrorista	Terrorist
Tonta	Stupid (f.)
Zorra	Bitch/Slut