Article

Telegram channels and bots: a ranking of Spanish media oulets

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Abstract: *Background*. Telegram, an Industry 4.0 style Russian-born communication service, is one of the world's most widespread communication platforms despite Putin's censorship. The availability of channels and bots has opened as a broadcast channel for any media outlet. *Objetives*. We asked the following questions: Do Spanish media outlets use Telegram channels? Which media outlets? Are they verified? What is their volume of subscribers? Can this information be used to rank media outlets? We identified many media channels and numerous variables were collected from each one. *Results and conclusions*. Forty-two Spanish media outlets have Telegram channels, 26 of which are ranked in the directory. Less than half of these channels are verified by the platform, and only three are linked to their website. This lack of verification could lead to the proliferation of fake channels. We created a ranking, and the top-10 includes two foreign, six national, and two regional media outlets.

Keywords: Telegram; media; Spain; channels; bots; fake channels; rankings

1. Introduction

Beginning as an alternative to WhatsApp and with an Industry 4.0 style, Telegram has come a long way. In 2013, Telegram was created outside the Silicon Valley ecosystem by the Russian brothers Nikolai and Pável Dúrov—the latter already famous as the creator of Vkontakte (currently known simply as VK), which is often called the "Russian Facebook." In 2014, Pável was forced to leave the hugely successful VK—and Russia—because of problems with the Putin administration, which even blocked the messaging application in 2018 (Wijermars 2021); however, its clandestine and nonconformist use continued (Santos et al. 2021). Currently, Telegram is registered in the British Virgin Islands, and its operations center is in Dubai.

Over time, Telegram transcended the limits of traditional messaging applications. Although behind WhatsApp in terms of the number of users, it has, from its inception, out-featured WhatsApp. One such feature is the availability of channels and bots.

Originally, its possibilities were much more limited than presently, and many of its capabilities may go unnoticed by its non-regular users. Nevertheless, surprisingly, even many of the media outlets that have long been using Telegram have overlooked the increasing number of capabilities of its current configuration. Initially, the possibilities of editing and publishing channels differed little from those of group chats. However, the gradual incorporation of management tools and advances in the capabilities of different updates have generated a panorama of free resources. These resources far exceed those of and include, in the same freeware, cross-platform, cloud-based instant messaging service, possibilities of disseminating and managing information from tools such as Twitter, YouTube, Twitch, Pinterest, Facebook, eBay, Drive, Calendar, Meet, Dropbox, and Flickr, among others.

The availability of channels and bots has opened up the possibility of using Telegram as a broadcast channel for any media outlet. These features have had such a significant impact that they have reconfigured the tool, which is currently being used massively as a platform to store, manage, and share data. We believe that this potential has not yet been fully exploited by the media—albeit with a few exceptions—as discussed in this article. However,

before addressing the media, we will review the state of the art to assess how Telegram has been treated in Communication literature.

1.1. Telegram and the Communication journals

Although the subject category is extensive, especially in Scopus (Piedra et al. 2016), the scientific production on this subject is not particularly prolific; nevertheless, it is increasing. A search for Telegram in the title, abstract, and keyword fields in Web of Science and Scopus, restricted to journals in the subject category Communication, retrieved (after eliminating the "telegram" hits that do not correspond to the portal) only 42 records. Sometimes, Telegram is only mentioned contrary to WhatsApp; other times, as part of a group of platforms equally studied, approximately half of the works are either focused only on Telegram or use this application as the main source of data.

Although this analysis precedes the end of 2021, Table 1 highlights the strong growth in the number of records. Even more striking is the other half of the table, which outlines the countries with at least two studies on the subject. Russia and Iran top the ranking in the first and second places, respectively. However, in the SCImago Journal and Country Rankings in Communication, Russia occupies 28th place and Iran 37th. Unsurprisingly, Spain ranks third because this is its place in the general ranking, behind the USA and the UK.

Table 1. Publication year and country. Sources: WOS & Scopus.

Year	#	Country	#
2017	1	Russia	10
2018	5	Iran	6
2019	4	Spain	4
2020	17	Indonesia	3
2021	15	Switzerland	2
		Nigeria	2
		The Netherlands	2
		Italy	2

Delving into the content of these studies, Figure 1 shows the image of a co-occurrence network diagram of subject keywords (co-keywords) extracted from publication records, as found in the WOS and Scopus. These keywords were processed using the bibliometric software Vosviewer developed by the Centre for Science and Technology Studies (CWTS), Leiden University (Eck and Waltman 2010).
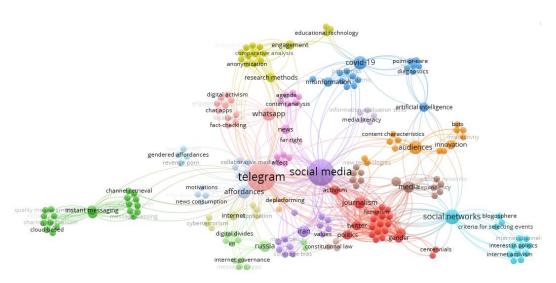

Figure 1. Co-occurrence network map of keywords. Sources: WOS & Scopus.

The two most frequent keywords are Telegram and social media, around which the other descriptors that have been automatically classified by the Vosviewer clustering algorithm are clustered. Initially, we expected that studies on the use of the application as another social network would prevail. Some research has been conducted on media literacy with Iranian (Akbari 2019) and Indonesian (Sukmasetya et al. 2019) students. These studies are identified in the network with the purple cluster together with other media literacy studies that go beyond the scope of university students and work with the general population (user behavior) but always in countries such as Iran (Hashemi and Zare 2019), (Shabani and Keshavarz 2021), Russia-Belarus (Bykov et al. 2021), and Singapore (Liew 2020).

The topic most commonly found in this set of documents is unrelated to media literacy but linked to political activism. As in Twitter, researchers have found Telegram as the ideal tool to read the pulse of the population—to assess their political sentiment (salmon, light blue, and bright red clusters). For example, the 2017 presidential campaign in Iran alone accounts for three studies (Ameli and Molaei 2020), (Kermani 2018), (Kermani 2020). By then, Spain had already experimented with an innovative news bot, which came to light in the disputed 2016 elections, termed Politibot. Developed by Eduardo Suárez and María Ramírez (El Español), the news bot provided more than 8,400 users with information on everything related to the elections in a balanced, fresh, and colloquial manner. Its success ensured that even after the elections, the bot continued—owing to 50,000 euros in funding from Google (Muela 2017). Additionally, the Politibot experience has been studied in detail by two Andalusian researchers (Sánchez and Sánchez 2017), (Sánchez and Sánchez 2018).

Telegram's link to politics is not limited to the electoral arena because this instant messaging service can also be a powerful tool to follow and study protest movements such as those in Russia (Popova 2021) and Belarus (Höhn et al. 2019) or feminist strikes in Spain (Iranzo 2020). Here, Telegram channels allow us to carefully examine the heart of activist communication, even in cases as extreme as that of the Islamic State (Krona 2020), (Sahrasad et al. 2020).

Studies have also ventured into the use of Telegram by the extreme right, which boomed once Donald Trump became the president of the USA. Trump's image is often used to identify far-right networks, which are highly decentralized but can be identified and even viewed from Telegram (Urman and Katz 2020). Additionally, Telegram hosts many far-right users who have been banned from other social networks—a phenomenon known as deplatforming (Rogers 2020).

At the top of the network, a blue cluster shows COVID-19 as its most significant keyword. In the studies of this cluster, Telegram was used in two different ways. On the one hand, Telegram was used as a health literacy tool to provide patients with training and information in Cuba (Estrada et al. 2021) and South Africa (Daramola et al. 2021), where even artificial intelligence-based solutions are applied. On the other hand, Telegram was also useful to study COVID-19-related hoaxes, fake news, and disinformation in general (Malhotra 2020), specifically in Africa (Adekoya and Fasae 2021).

Indeed, few studies have assessed Telegram's effect on the journalistic world, but they appear associated with the articles of the bright red cluster. At first, as indicated above, Telegram timidly emerged as WhatsApp's alter ego for detecting hoaxes and fake news (Palomo and Sedano 2018). However, immediately after, it appeared in the title of a few works as an increasingly leading tool (Sánchez and Martos 2020), albeit not yet sufficiently adapted to journalism as other social networks (Learreta et al. 2021), particularly Twitter (Herrero and Trillo 2014).

Considering the above, Telegram is a platform with considerable public demand for information consumption through its well-known channels. These channels and bots are widely used by various groups, from various activists (far-right, jihadists, and anti-systems, among others) to convalescent patients. However, as the studies cited in the previous paragraph indicate, journalists and the media are not yet tapping into its potential. Therefore, in this article, we propose to study the Spanish media that use Telegram channels to share the news with and contact its users. The difference between channels and bots does not affect the object of study. A channel can be fed by a bot but not necessarily. As such, we will,

henceforth, only mention channels to avoid confusing the reader. Ultimately, we aim to answer the following research questions:

> PI1. Do Spanish media use Telegram channels?
> PI2. Which media, and are they verified?
> PI3. What is their volume of subscribers and publications?
> PI4. Do they use all available options?
> PI5. Can this information be used to rank the media?

2. Materials and Methods

First, we assumed that the channels we were interested in studying were public and, therefore, open to consultation by any normal user of the platform. Identifying a channel only requires launching a general search with the name of the media outlet, which will return the channels that most resemble the name and display the messages of our channels that already contain that name. This spamdexing is already the first inconvenience for users because they can find more than one channel that may look like an official channel of the media outlet but is not. Such a lack of oversight is a highly sensitive issue, especially in an environment where fake news from fake channels abounds.

To solve this problem, two alternatives are proposed: (a) verifying the channel; (b) accessing the channel from the website of the media outlet. As shown below, these options are not always available.

In fact, we do not have a directory of Spanish media channels either; therefore, we have built such a list from the study of digital audiences entitled "Digital News Report España 2021" (Kaufmann 2021). All the media included in the study were examined and filtered as described below until only 42 remained:

1. We searched for the web version of the media outlets that post news or link to their Telegram channel, as almost all of them link to their Twitter, Facebook, and Instagram profiles, and some to their YouTube channel and other applications. Surprisingly, we found that only three media outlets post news and provide access to their Telegram channel;
2. We searched Telegram for the same media outlets and found that 30 of the 42 headers included a Telegram channel, but only eight were verified by Telegram;
3. We refined the initial list of 30 channels and found that four of them had been inactive for more than six months;
4. We trimmed the list to 26 channels after excluding the four inactive channels;
5. In the 26 selected channels, we identified their date of creation by clicking the options button at the top-right of the screen, selecting "go to the first message" from the dropdown lists, and checking the record of the date of creation. In all of them, this date is specified before the first message;
6. The number of subscribers of each channel has been registered as of January 1, 2022. The information on the number of subscribers is public data, which can be retrieved from the channel.
7. Below, we searched the post number of each channel on the same date. This information is not expressly indicated in the general information of the channel but can be accessed by requesting a news link, which indicates the order number of its publication. To gather information on the total number of publications of each channel, we recorded the order number of the first news item published;
8. After gathering the name, the date of creation, and the number of subscribers and posts, we divided the number of subscribers by the total number of posts of each channel, thereby calculating the S/P ratio, which will be the object of our analysis;
9. Finally, we made the final table, ranking the channels by the number of subscribers from highest to lowest;

10. We collected other types of additional data, such as the number of photos, videos, links, comments, sections, and hashtags, among others. Several of them can be quantified, but to avoid complicating the analysis, we have only identified them through a series of icons;

3. Results

Following the steps described in the previous section, we ranked the media outlets, as outlined in Table 2. For each medium, we included its start date, the number of subscribers, the number of posts, and the ratio between the two, ranking the channels by the number of subscribers from highest to lowest.

3.1. Media ranking

Table 2. Media ranking. Source: the authors

Medium	Start	Subscribers	Posts	S/P
RT en español	8/16/16	110772	24128	4,59
eldiario.es	9/25/15	45795	7152	6,4
laSexta	4/14/20	27120	1792	15,13
euskalnews.com	4/25/20	23873	5671	4,21
CNN en Español	7/1/16	21167	3058	6,92
Público	7/28/16	16244	6573	2,47
elnacionalcat	1/25/17	15808	17897	0,88
Antena 3 Noticias	5/25/20	11400	3068	3,72
El Mundo	4/11/16	10986	3229	3,4
EL PAÍS	6/22/16	10782	3162	3,41
Libertad Digital Oficial	2/26/19	7459	583	12,79
Diario MARCA	8/21/19	4157	79033	0,05
COPE	7/14/20	4115	3153	1,31
Europa Press	2/3/21	4057	781	5,19
20 minutos	8/5/18	2314	137471	0,02
El Huffpost	4/18/16	2177	794	2,74
Granada Hoy	10/30/20	2150	580	3,71
El Confidencial	4/12/18	1988	42473	0,05
Diario AS	8/20/19	1980	109124	0,02
OK Diario™	11/11/20	1610	756	2,13
La Voz de Galicia	5/22/20	1161	54689	0,02
Vozpópuli	3/29/21	866	297	2,92
Euronews Spain	1/6/16	609	44183	0,01
La razón	7/9/20	313	9421	0,03
Esdiario.com	7/7/20	255	821	0,31
Cadena SER Jaén	2/22/21	202	246	0,82

The start sequence of the channels shows three clusters or periods in the creation of media channels in Spanish:

1. An initial period starting at the end of 2015 and ending at the beginning of 2017, in which the first nine media are launched—eldiario.es, Euronews Spain, El Mundo, El Huffpost, EL PAÍS, CNN en Español, Público, RT en español, and elnacionalcat;
2. An intermediate period, from the spring of 2018 till the summer of 2019, during which five channels started-El Confidencial, 20 minutos, Libertad Digital Oficial, Diario AS, and Diario MARCA;
3. A more recent period, during the ongoing pandemic, from April 2020, under lockdown, till March 2021, in which the remaining 12 were launched-laSexta, euskalnews.com, La Voz de Galicia, Antena 3 Noticias, Esdiario.com, La razón, COPE, Granada Hoy, OK Diario,Ñ¢, Europa Press, Cadena SER Ja√©n, and Vozpópuli;

The date of creation of the channel is somewhat correlated with the number of subscribers, with the oldest channels accumulating a higher number of subscribers, except for laSexta and euskalnews.com, which, despite being among the most recent channels, enjoy a substantial volume of users. Conversely, the date of creation is not correlated with the number of posts because the most prolific channels are found in the intermediate period, not the oldest. As shown below, this number of posts depends on the criteria for creating and feeding the channel and not particularly on its age. In fact, some channels created on a specific date were used intensively only after some time, not immediately. Some channels have also maintained an inconsistent activity during specific periods, with the channels that seem to be mere automations of their social networks remaining the most constant. However, this constant activity is not indicative of the media outlet's interest in their Telegram channel because these channels do not require any intervention. Other media outlets, which edit the news that they publish or provide news selections and reading recommendations, show more interest but have sometimes been less consistent than those who have automated the publication process. Based on how the messages of some of the channels appear, some media outlets could even be unaware of the existence of their Telegram channel because their messages have had the same format since day one. Thus, the number of publications may not always result from a specific editorial effort.

To make it easier to read, we colored the cells in a gradient from high values in green and low values in red. At this point, we considered ranking alternatives. In no case could the number of posts be used as the sole criterion because this variable exclusively depends on the channel creator. In this case, "more is not better" but the opposite. Some channels directly "link" the Telegram channel as a feed from the media website—a strategy that does not usually lead to good results.

Our first option was the number of subscribers because this variable expresses an action of common users who choose to connect and who remain connected with a channel over time. The latter further emphasizes the value of the number of subscribers because most subscribers have reached the channel without an invitation to the user community. The absolute values of the number of subscribers are relevant in that the publications are reproduced and available in their entirety to each user, who can see them when they are posted and access them on the corresponding website at any time. Subscription is a voluntary act, after which the application will send and automatically notify the user of any new publication, although notifications can be muted. The channel can even be archived and removed from the main folder, without stopping receiving new news, which will be stored and remain accessible to the user at any time.

Accessing a public Telegram channel does not require being a subscriber, and any channel can be viewed in its entirety by any Telegram user. Accordingly, these channels have been viewed by users who are not subscribers. Nevertheless, subscription is important because this parameter indicates that the Telegram channel of the media outlet has been added to the user's chat list. Further, it indicates that when the user performs general or specific searches in the channel, the system responds with information on all messages included in the channel in both free text and hashtags. When a subscriber of a Telegram channel searches for a sequence of characters, the system responds with a

message that fully meets the criteria. Finally, we combined both indicators in a ratio (subscribers/posts) to assess whether the resulting ranking was more significant. The results showed otherwise, but we identified two media outlets with interesting behaviors for further analysis.

The ranking column shows a considerable chromatic difference between the first (RT en español) and the second channel because the first is the only truly green channel. RT en español is the only channel with more than 100,000 subscribers—comfortably doubling the second, eldiario.es, which has not yet reached 50,000 subscribers. Just above the middle of the ranking, a group of three channels—laSexta, euskalnews.com, and CNN en Español—lie in the range of 20,000 subscribers. Público, elnacionalcat, Antena 3, El Mundo, and El País complete the top-10 channels with the most subscribers, exceeding 10,000. All other channels fall short, with the last five failing to reach 1,000 subscribers. Organizing these data by date of creation of the channel shows that the top 10 channels also occupy the first positions in terms of the number of subscribers, except for Euronews Spain, which lags in the 23rd place, with only 313 subscribers, despite being the second-oldest channel and having been active for six years. The top 10 include two channels of international media outlets (RT en español and CNN en Español), six channels of major national media outlets, and, surprisingly, two channels of regional media outlets (euskalnews.com and elnacionalcat), which stood out. To indicate the relevance of the position of these media, we will cross these data with other online audience data in future studies.

The number of posts is clearly not correlated with that of subscribers. Here, 20 minutos tops the list, with almost 140,000 posts, followed by Diario AS, with nearly 110,000 posts, Diario Marca, with just under 80,000 posts, and La Voz de Galicia, Euronews Spain, and El Confidencial, in the range of 50,000 posts. They are followed by RT en español, elnacionalcat, and La Razón, with nearly 25,000, just under 18,000, and almost 10,000 posts, respectively. The top-10 ranking of posts is closed by eldiario.es with just over 7,000 posts. The results highlight that the volume of posts does not correlate with the date of creation or—and much less so—with the number of subscribers. As stated above, the number of posts is related to the editor's criteria when configuring the channel and, inherently, to the news generation potential of the medium, at least the news available online.

Most interestingly, the S/P ratio of the last column is not correlated with any other parameter in the previous columns despite its greater affinity with the number of subscribers. In line with the above, the lower values are found in the lower-half of the ranking, and the higher values are found in the upper-half. Here, two media outlets have a significantly higher ratio than the others: laSexta and Libertad Digital Oficial. Their Telegram channels have a significant number of subscribers—placed at 3 and 11 in this ranking, respectively—but a limited number of posts; this should be examined in more detail. This disparity may be related to the increase in the number of users in the case of laSexta and the frequency of posts in the case of Libertad Digital Oficial.

These Telegram channels operate differently from each other. The analysis of their use of resources showed that laSexta uses fewer resources. However, it uses them highly effectively while pursuing a highly specific goal of attracting attention to the medium in search of an audience by daily repeating news routines simultaneously and sometimes with careful formats, even to break routines. In turn, Libertad Digital Oficial seeks to draw more attention by notifying its users about an important issue at specific times, using different means and doing so less systematically. Although we cannot quantitatively confirm this observation at this time, this subject will be studied in the immediate future.

3.2. Other features

In addition to subscriber data and posts, we collected numerous complementary features and data. However, we did not want to include them in the ranking because they did not substantially modify the ranking and could add noise to the analysis of the previous section. Although some features are quantifiable, we believe that indicating their presence in each channel suffices for this analysis. Those features are detailed in Figure 2.

✓	getting a Telegram verified badge for the channel
📷	posting photographs
🖥	posting videos
🎙	posting audio
♻	posting animated GIFs
✎	posting links
☛	linking the channel to the website of the media outlet
🏃	using the Quote Telegram Channel
📖	enabling comments from subscribers
👍	enabling quick reactions from subscribers to posts
✐	editing news in different formats
🗐	repeating sections
⚛	Sister channels
🏷	using hashtags

Figure 2. Features analyzed. Source: the authors

Thus, we constructed Table 3 outlining the options present in each of the 26 media outlets under study. The results show that the number of features is higher in the top-ranked media.

Media name	Features
RT en español	✓ 📷 🖥 🎙 ♻ ✎ ☛ 🏃 📖 👍 ✐ 🗐 ⚛
eldiario.es	✓ 📷 🖥 🎙 ♻ ✎ ☛ ✐ 🗐
laSexta	✓ 📷 ✎ 🏃 ✐ 🗐
euskalnews.com	📷 🖥 🎙 ✎ 🏃 ✐ 🗐
CNN en Español	📷 🖥 🎙 ♻ ✎ ✐ 🗐
Público	✓ 📷 🎙 ✎ ✐ 🗐
elnacionalcat	✓ 📷 🖥 ✎ ✐ 🗐
Antena 3 Noticias	✓ 📷 🖥 ✎ ✐ 🗐
El Mundo	✓ 📷 🖥 ✎ ✐ 🗐
EL PAÍS	✓ 📷 🖥 🎙 ♻ ✎ ✐ 🗐
Libertad Digital Oficial	✓ 📷 🖥 ♻ ✎ ✐ 🗐
Diario MARCA	📷 ✎ 🗐
COPE	📷 ✎ ✐ 🗐
Europa Press	📷 🖥 ♻ ✎ ✐ 🗐
20 minutos	📷 🖥 ✎ 🏷
El Huffpost	📷 🖥 🎙 ✎ ✐ 🗐
Granada Hoy	📷 ✎ ☛ ✐ 🗐
El Confidencial	📷 ✎ ✐ 🗐
Diario AS	📷 ✎ ✐
OK Diario™	📷 🖥 ♻ ✎ ✐
La Voz de Galicia	📷 ✎ 🗐 🏷
Vozpópuli	📷 🖥 ♻ ✎ ✐ 🗐
Euronews Spain	✎ 🗐
La razón	📷 🖥 ♻ ✎
Esdiario.com	📷 🖥 ♻ ✎
Cadena SER Jaén	✎

Figure 3. List of other features. Source: the authors

The most striking result is that Telegram verified channels are located exclusively in the upper half of the ranking, which raises the question as to whether verification is one of the criteria adopted by users for subscribing to a channel. Nevertheless, if a channel is not verified, users can visit the website of the corresponding media outlet to "connect" to the channel. However, of the 17 non-verified channels, only one has a link to the website

of the media outlet (Granada Hoy). For the other channels, users must make additional inquiries, as we were required to do ourselves, and of which we cannot be 100% sure.

In most cases, no reference is made to the intentions or reasons that have led the media outlet to be present in this application, neither on the Telegram channel nor on its website. This lack of information is confusing because, presumably, media outlets open their websites with different web 2.0 tools to improve the benefits of their services and bring their offers closer to users from different communities.

A Telegram channel linked to the website of the corresponding media outlet should be the official channel of that medium. However, when fake news is the order of the day, users may relatively easily subscribe to a channel that ultimately leads to news from outlet X but is not managed by the outlet. This channel could select only some news from media X, thereby skewing its editorial line. This bias would be especially significant in media outlets with large news production and without a clear editorial line. We have detected such a case, which we will analyze in a future study—but we labeled it as a fake channel. This is an interesting concept on which, to the best of our knowledge, no research has been published yet; most studies usually only address fake members (subscribers) of a specific channel.

Almost all Telegram channels present some multimedia information—(mostly) photos, videos, audios, animated GIFs, and links—giving direct access to each of these media through information on the channel. As indicated above, at first, the number of posts on each type of media was recorded numerically, but we ruled out a quantitative assessment because the results do not add value to the analysis. Similarly, posting links is strongly correlated with the number of posts because the channels usually link all their news to the equivalent information on their website. Enabling comments and reactions is not a determining feature of a channel either.

However, we believe that a little-used feature with high potential is the hashtag. On Twitter, hashtags are crucial for following the news (through trending topics) but simultaneously useless to retrieve information diachronically. Conversely, on Telegram, hashtags are decisive for the latter purpose. They have tremendous potential for retrieving information, which the media outlets overlook. Only two media outlets use them (20 minutos and La Voz de Galicia), but they do not take advantage of them because they include them randomly and fortuitously. If they were assigned systematically and according to some internal thesaurus, they could turn any channel into a massive news database effortlessly. Although this task is usually assigned to librarians, journalists who know how to implement these features could generate a channel whose usability would make the channel highly addictive for the advanced user.

Considering the above, the possibilities of configuring a channel for a medium are highly varied. Until now, channels have been created more or less mechanically and, sometimes, even carelessly. We believe that creating a model for channel configuration and implementation may configure a development—a task that we will undertake in the near future.

4. Discussion

As detailed above, we can now answer our research questions. Approximately 26 Spanish media outlets maintain active Telegram channels. These media outlets have been able to identify themselves, but less than half are verified by the platform, and only three are linked to their own website. This lack of verification could facilitate the proliferation of fake channels—channels with information from a media outlet but edited by people outside the organization.

We ranked these 26 Spanish media outlets by the number of subscribers over that of published posts. The ranking is comfortably led by RT en Español, with eldiario.es in second place. In turn, the top-10 ranking includes two foreign media outlets, six national media outlets, and two regional media outlets (euskalnews.com and elnacionalcat). laSexta and Libertad Digital Oficial also stand out for their S/P ratio.

In terms of features and options, the channels tend to use various types of multimedia, especially photographs, but they do not significantly use other powerful features such as hashtags. Even channels with hashtags do so incorrectly and incompletely. Properly managing hashtags (based on a thesaurus) can turn a simple media channel into a substantial news database.

This initial study has been highly enlightening and presents us with a series of future lines of research on which our work will continue. We will cross our ranking data with other online audience data to identify the channels above their target audience. We also believe that a deeper study of the verification and official recognition of channels is important to avoid (or at least identify) fake channels. Creating a Telegram channel with news from a media outlet edited by someone outside the outlet can be a subtle form of fake news.

With all these experiences, in the longer term, we should be able to define a Telegram channel model for media that integrates the most powerful features of the platform and simultaneously gives subscribers all the necessary guarantees for the automatic consumption of personalized news.

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