

# WhatsAppening to the news in Brazil? A mixed-method study on news publishers' struggle to adapt to WhatsApp's inherent characteristics of mobile and interpersonal communication

Giuliannder Carpes

University of Toulouse 3 Paul Sabatier  
giuliannder.carpes-da-silva@univ-tlse3.fr

Enric Moreu

Dublin City University  
enric.moreu2@mail.dcu.ie



Submission date: June 2022

Accepted date: May 2023

Published in: June 2023

**Recommended citation:** CARPES, G. and MOREU, E. (2023). "WhatsAppening to the news in Brazil? A mixed-method study on news publishers' struggle to adapt to WhatsApp's inherent characteristics of mobile and interpersonal communication". *Anàlisi: Quaderns de Comunicació i Cultura*, 68, 45-62. DOI: <<https://doi.org/10.5565/rev/analisi.3545>>

## Abstract

After Facebook started prioritizing posts from family and friends on its newsfeed at the beginning of 2018, news consumption on social media increasingly migrated to other mobile applications such as WhatsApp. This has put pressure on media organizations to establish channels on the platform in an attempt to compensate for the decline in audience figures. Journalistic practices on WhatsApp remain poorly understood. Building on the "diffusion of innovations" theory, this article examines whether the way newsrooms have adapted to WhatsApp follows similar patterns to their adoption of social media for news distribution, or whether they have been able to develop new practices that fully consider the tool's inherent characteristics of mobile and interpersonal communication. Focusing on Brazil as a case study, this study draws on the analysis of 8,855 messages sent to WhatsApp news channels and interviews with 21 editors and executives from publishers, and shows that newsrooms have hardly adapted to the possibilities of WhatsApp beyond its technological aspects. Audience engagement has often been neglected or has been addressed with a lack of consistency. According to the interviewees, constraints presented by WhatsApp, such as the large amount of manual work it requires of newsrooms, make it difficult for news organizations to adopt the platform to transform their relationship with their readers.

**Keywords:** journalism; WhatsApp; diffusion of innovations; news distribution; audience engagement; mixed methods

---

**Resum.** *WhatsAppejar les notícies al Brasil. Un estudi de mètode mixt sobre la lluita dels editors de notícies per adaptar-se a l'essència de la comunicació mòbil i interpersonal de WhatsApp*

---

Després que Facebook comencés a privilegiar les publicacions de familiars i amics en el seu subministrament de notícies a principis de 2018, el consum de notícies en les xarxes socials va migrar cada vegada més a altres aplicacions mòbils, com WhatsApp. Aquesta situació ha forçat els mitjans a establir canals en la plataforma en un intent de compensar el descens de les xifres d'audiència. Les pràctiques periodístiques en l'aplicació de missatgeria continuen sent poc conegudes. Sobre la base de la teoria de la difusió de les innovacions, aquest article examina si l'adaptació de les redaccions a WhatsApp segueix patrons similars a l'adopció de les xarxes socials per a la distribució de notícies o si les organitzacions de notícies han pogut desenvolupar noves pràctiques que consideren completament l'essència de l'eina de comunicació mòbil i interpersonal. Centrant-se en el Brasil com a estudi de cas i basant-se en l'anàlisi de 8.855 missatges enviats als canals de notícies de WhatsApp i de 21 entrevistats amb editors i executius d'editorials, aquest estudi mostra que les redaccions a penes s'han adaptat a les possibilitats d'aquesta aplicació més enllà dels seus aspectes tecnològics. La participació de l'audiència sovint s'ha descurat o s'ha abordat amb falta de coherència. Segons les persones entrevistades, les limitacions que presenta WhatsApp, com la gran quantitat de treball manual que exigeix a les redaccions, dificulten l'adopció d'aquesta eina per transformar la relació entre els mitjans i els seus lectors.

**Paraules clau:** periodisme; WhatsApp; difusió de les innovacions; distribució de notícies; participació de l'audiència; mètode mixt

---

**Resumen.** *WhatsAppear las noticias en Brasil. Un estudio de método mixto sobre la lucha de los editores de noticias para adaptarse a la esencia de la comunicación móvil e interpersonal de WhatsApp*

---

Después de que Facebook comenzara a privilegiar las publicaciones de familiares y amigos en su suministro de noticias a principios de 2018, el consumo de noticias en las redes sociales migró cada vez más a otras aplicaciones móviles, como WhatsApp. Esta situación ha forzado a los medios a establecer canales en la plataforma en un intento de compensar el descenso de las cifras de audiencia. Las prácticas periodísticas en la aplicación de mensajería siguen siendo poco conocidas. Sobre la base de la teoría de la difusión de las innovaciones, este artículo examina si la adaptación de las redacciones a WhatsApp sigue patrones similares a la adopción de las redes sociales para la distribución de noticias o si las organizaciones de noticias han podido desarrollar nuevas prácticas que consideran completamente la esencia de la herramienta de comunicación móvil e interpersonal. Centrándose en Brasil como estudio de caso y basándose en el análisis de 8.855 mensajes enviados a los canales de noticias de WhatsApp y de 21 entrevistas con editores y ejecutivos de editoriales, este estudio muestra que las redacciones apenas se han adaptado a las posibilidades de esta aplicación más allá de sus aspectos tecnológicos. La participación de la audiencia a menudo se ha descuidado o se ha abordado con falta de coherencia. Según las personas entrevistadas, las limitaciones que presenta WhatsApp, como la gran cantidad de trabajo manual que exige a las redacciones, dificultan su adopción para transformar la relación entre los medios y sus lectores.

**Palabras clave:** periodismo; WhatsApp; difusión de las innovaciones; distribución de noticias; participación de la audiencia; método mixto

---

## 1. Introduction

Between the end of 2016 and the beginning of 2018, Facebook significantly reduced the connection between news organizations and their audiences as it started prioritizing posts from friends and family in its newsfeed (Cornia et al., 2018). As a result, news consumption increasingly migrated to other mobile tools such as WhatsApp, which has become the most popular messaging application (“app”) in the world (Newman et al., 2021).

Although it currently offers practically all its functions in web and desktop versions, WhatsApp was originally developed, and is still mostly used, as a mobile application for interpersonal communication (Agur, 2019). At least since 2014, WhatsApp has been employed by news organizations for content distribution, which demonstrates a potential technological change for newsrooms (Fares, 2018). The platform seemed particularly useful for so-called proximity media: initiatives focusing on regional, local and hyperlocal communities (Negreira-Rey, López-García and Lozano-Aguiar, 2017). Some European local publishers started to use it to compensate for their declining audiences on Facebook (Jenkins and Nielsen, 2018).

Interpersonal communication has been an aspect particularly valued by some studies, as WhatsApp has been used by newsrooms to engage with audiences, whether to meet occasional demands, clarify doubts or even collect information relating to news tips and user-generated content such as reports, photos and videos of noteworthy events (Angeluci, Scolari and Donato, 2017). This kind of use could represent an important change in the relationship between journalists and readers.

This study examines how news organizations have adapted to the inherent characteristics of WhatsApp while employing it to communicate with users. The study focuses on understanding if newsrooms have really been able to benefit from WhatsApp’s technological possibilities in order to develop closer relationships with news audiences, and what the constraints have been to its broader use.

### *1.1. Newsroom adaptation to social media and messaging apps*

“Diffusion of innovations” theory is one of the most popular approaches to address the adoption of new technologies. It explains how a new idea, behavior or product is embraced by a social system (Rogers, 2003). Rogers proposed five attributes to explain why some innovations spread quickly while others do not: *Relative advantage*, or “the degree to which an innovation is perceived as being better than the idea it supersedes” (p. 257); *compatibility*, or “the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters” (p. 258); *complexity*, or “the degree to which an innovation is perceived as relatively difficult to understand and use” (p. 258); *trialability*, or “the degree to which an innovation may be experimented with on a limited basis” (p. 249); and

*observability*, or “the degree to which the results of an innovation are visible to others” (p. 250).

At the organizational level, innovation diffusion goes through two phases: initiation and implementation (Rogers, 2003). Initiation comprises two stages: *agenda-setting*, in which an organization identifies issues that demand innovation; and *matching*, when a company finds an innovation and evaluates whether it has the potential to solve the identified problem. Implementation starts with *redefinition and restructuring*, as the innovation is adapted to the organization’s needs and structures, followed by a *clarifying* stage, in which the innovation becomes more widely understood by the firm, and *routinizing*, when the innovation is completely incorporated.

Critics have called this approach overly simplistic and generalist (Karnowski, von Pape and Wirth, 2011). For Lievrouw and Livingstone (2010), innovation adoption is not a linear and stable process; there may be regressions and changes in direction along the way. For Micó, Masip and Domingo (2013), the theory ignores the process through which individuals can shape and even reject technologies. Despite criticism, it still seems that the diffusion of innovations theory fits this study, as the attributes proposed by Rogers (2003) are useful for assessing the level of adaptation to WhatsApp by newsrooms.

Several studies over the last two decades looking at the adoption by newsrooms of different new technologies have used the diffusion of innovations framework, and have revealed a certain consensus: a professed acceptance of these innovations by journalists, accompanied by concerns about their complexities and their compatibility with established norms and values (Ekdale et al., 2015). This response has led to a conservative adoption of new technologies, aiming only for them to fit in with existing practices but without the introduction of major changes in the relationship between journalists and the audience (Reich, 2013). Studies on the adoption of Twitter, for example, have shown that the platform spread quickly among journalists because it was compatible with practices for disseminating breaking news (Hermida, 2010). According to Lasorsa, Lewis and Holton (2012), journalists normalized Twitter by offering more opinions, but without relinquishing their traditional role as news gatekeepers. In one of the few broader studies on adaptation to WhatsApp by journalists, Boczek and Koppers (2020) presented a similar logic: news organizations assimilated some characteristics of the tool relating to news consumption, but audience engagement remained largely overlooked.

### *1.2. Aspects of news consumption on mobile devices*

For most people, media use has traditionally occurred during leisure time, whether in the evening or at weekends (especially at night), which became known by TV programmers as “prime time”. News consumption on mobile devices, though, occurs in “interstices”: brief free moments during users’

daily routines (Dimmick, Feaster and Hoplamazian, 2011). As people spend more time connected to their mobile phones, news has actually become inter-linked with their activities (Struckmann and Karnowski, 2016). News consumption turned into several frequent “snacks” throughout the day (Van Damme et al., 2015).

Quick checks on smartphones tend to be even shorter than on other connected devices, and news consumption becomes increasingly dependent on social media and messaging applications (Molyneux, 2018). To meet the “news snacking” habit of mobile device users, the media would need to maintain a constant publication of new content that matches people’s “always-on” behavior, and this content should be as succinct as possible. Previous studies considered multimedia content such as images, videos and audios to be elements that enhance the rapid absorption of information (Bucy and Newhagen, 2004) and consequently align well with the concept of news snacking. To them, we can add *emojis* – pictograms capable of conveying feelings and complementing ideas contained in written texts. Emojis have already become an essential part of the language employed by users in messaging applications.

A potentially negative consequence of news snacking is that readers have a superficial knowledge of public affairs (Costera Meijer, 2007). In this sense, there is a concern that the historical difference between the types of subjects journalists favor in their coverage (public affairs such as politics and economics) and topics that readers would like to consume (non-public affairs such as sports, entertainment and crimes) increases, making the work of journalists more difficult and eventually decreasing participation in public debate (Boczkowski and Mitchelstein, 2013).

### *1.3. Towards a definition of audience engagement*

Media executives, journalists and researchers have struggled to agree on a definition of audience engagement, a concept that has been subject to several different interpretations, according to the contexts and subjectivities involved (Nelson, 2018). In research, audience engagement has usually been used to characterize public participation or is associated with editorial metrics that give publishers an idea of reader loyalty (Lawrence, Radcliffe and Schmidt, 2018).

Nelson (2021) argued, though, that definitions of audience engagement tend to focus solely on the audience, ignoring the deliberate attempts by news producers to reach them. Nelson suggests a distinction between reception-oriented engagement, which “focus[es] primarily on the audience’s reception of news: How much time did they spend with a story? How many times did they tweet about it or comment on it?” (p. 7); and production-oriented engagement, which “focus[es] on news production: How many citizens participated in the creation of this story? How many diverse voices were included as sources? How much of the audience requested this story in the

first place?” (p. 8). However, incorporating audience participation into the process of news production and distribution has been complicated because it conflicts with traditional values of professional journalism (Lawrence, Radcliffe and Schmidt, 2018). Thus, our literature review leads us to the following research questions:

- RQ1. To what extent are news organizations adapting to the specific characteristics of news consumption on WhatsApp?
- RQ2. To what extent are news organizations using WhatsApp to incentivize their audiences to engage with news production?
- RQ3. In the opinion of editors, what are the reasons for and the constraints to the wider adoption of WhatsApp as a news distribution and audience engagement tool?

## 2. Methodology

### 2.1. *Mixed-method research and data collection*

Brazil is the largest country in Latin America and has a media structured mostly around a private oligopoly that owns TV and radio stations, newspapers and online sites (Guerrero and Márquez-Ramírez, 2014). Brazilians are recognized as being some of the most enthusiastic users of the internet, spending on average over nine hours per day online (the global average is around six hours per day). Most of that time is spent on social media and on messaging applications such as WhatsApp, by far the most popular app in the country (used by 96.4% of the population). More than 40% of its population use it for finding news (Newman et al., 2021), making it an interesting case for this research.

We joined 18 active groups and *broadcast lists* owned by 14 different Brazilian publishers on the platform to start data collection (Table 1). We focused our research primarily on news organizations that have content distribution channels on WhatsApp, prioritizing newspapers and digital news natives that offer local, regional and national coverage, including some focused primarily on content distribution through WhatsApp, a situation that seems to be very particular to Brazil. This diversity helped to compare different types of publishers and identify possible trends that have become commonplace only among specific types of news organizations.

**Table 1.** Brazilian media with news distribution channels on WhatsApp included in our analysis

News outlet	Type	Reach	Channels on WhatsApp
O Estado de S. Paulo	Newspaper	National	O Estado de S. Paulo
Gazeta do Povo	Newspaper	National/local	Gazeta do Povo Gazeta do Povo Local
UOL	Digital news native	National	UOL Economia+ UOL Tilt
The Intercept Brasil	Digital news native	National	The Intercept Brasil
Pública	Digital news native	National	Pública
Aos Fatos	Digital news native	National	Aos Fatos
Correio Sabiá	WhatsApp-based	National	Correio Sabiá
Panorama	WhatsApp-based	National	Panorama
GZH	Newspaper	Regional	GZH GZH Coronavirus
Tribuna do Paraná	Newspaper	Regional	Tribuna do Paraná
Jornal do Comércio	Newspaper	Local	Jornal do Comércio
O Município	Newspaper	Local	O Município O Município Joinville
Matinal	Digital news native	Local	Matinal
O Mirante Joinville	Digital news native	Local	O Mirante Joinville

Source: Authors' own.

## 2.2. Computational and in-depth human-coded content analysis

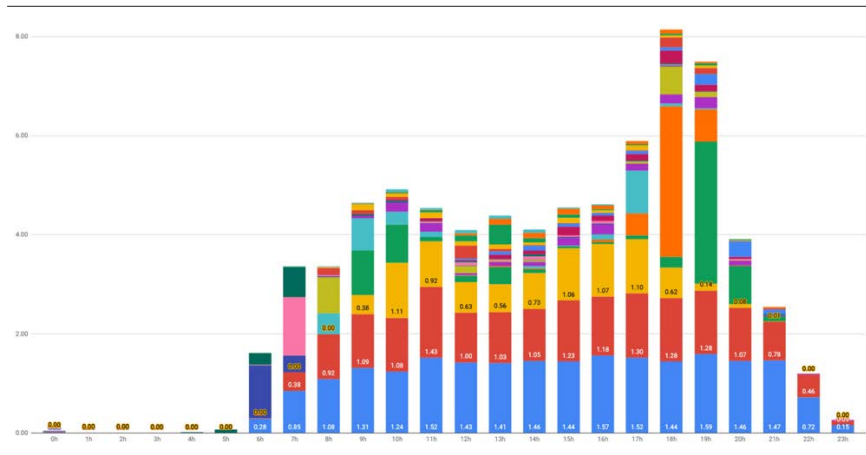
To answer RQ1, first we performed a quantitative content analysis of 8,855 messages sent by publishers on their WhatsApp channels over four months (exactly 120 days), between 9 November 2020, and 8 March 2021 (dataset COMP). Data were collected by exporting each chat on WhatsApp for iPhone, and analyze the text using Python (Van Rossum, 1995) for the dimensions of news snacking (frequencies, times of day, text formats, message lengths, adoption of multimedia formats, and use of emojis). To complement this, we conducted an in-depth, human-coded content analysis of 965 messages (dataset HUM) sent over two weeks within that period (from 11 January to 24 January, 2021) to examine the type of subjects addressed by the channels. Topics were manually coded based on 14 categories used by Boczek and Koppers (2020), namely politics, international affairs, economy, crime, disaster, weather, arts, sports, entertainment, lifestyle, science, transportation, prize competitions, and events calendars. After a pretest on coding data, we added one topic (health) that seemed important in the context of the COVID-19 pandemic. The use of WhatsApp as an interpersonal communication tool to engage with audiences (RQ2) was determined by coding each message on dataset HUM for seven types of requests for audience engagement (survey, contact, share, promotion, feedback, questions, crowd-sourcing). Categories were defined after coding pretest data and by refining the categories used by Boczek and Koppers (2020).







**Figure 2.** Average number of messages sent by news outlets per hour of the day



Source: Authors' own based on the analysis of dataset COMP.

### 3.1.2. Text formats and lengths

News organizations from our sample essentially implemented three distinct news distribution strategies on WhatsApp: 1) several messages a day, each with a link aimed at redirecting the reader to an article on the publisher’s website, similar to the use made by news organizations of social media such as Facebook and Twitter; 2) a few messages (sometimes just one, but at most three) a day, with at least three or four links (sometimes more) intended to summarize the news during a specific period of time (morning, afternoon or the whole day), similar to the strategy used by news organizations and independent journalists to distribute email newsletters; and 3) no more than a single message a day, with only one or maximum two links redirecting to the news outlet’s website.

Adopters of the first strategy were local news outlets using messaging apps with the goal of building a wider audience, such as *Tribuna do Paraná* and both branches of *O Município*, confirming a similar trend found by Jenkins and Nielsen (2018) in Europe. These publishers arrived late to social media and were not able to catch the boom in news distribution through Facebook, nor could they benefit from the great organic growth that this dominating platform provided to news pages until around the mid-2010s. Their messages were usually plain and simple, limited to not more than 150 characters (the headline and/or a short description of the news piece).

A ‘newsletter strategy’ seemed to be the most popular one in our sample, not only for established media companies such as *O Estado de S. Paulo*, *UOL* and *GZH* but also for emerging online initiatives such as *Aos Fatos*, *Correio Sabiá* and *Panorama*. The messages from these players had more in-depth descriptions of each of the various news articles compiled (ranging from 600 to 2,700 characters) and their respective links.

A few investigative news initiatives, such as *Agência Pública*, *The Intercept Brasil* and the *GZH* channel focused solely on the subject of COVID-19, adopted the third kind of approach, which can be understood as an attempt to maintain a minimal presence on WhatsApp without committing too much to the logic of news consumption using these tools. Their messages were short, although of relatively differing sizes: 200 characters for *GZH Coronavirus*, and from around 400 to 800 characters for the others.

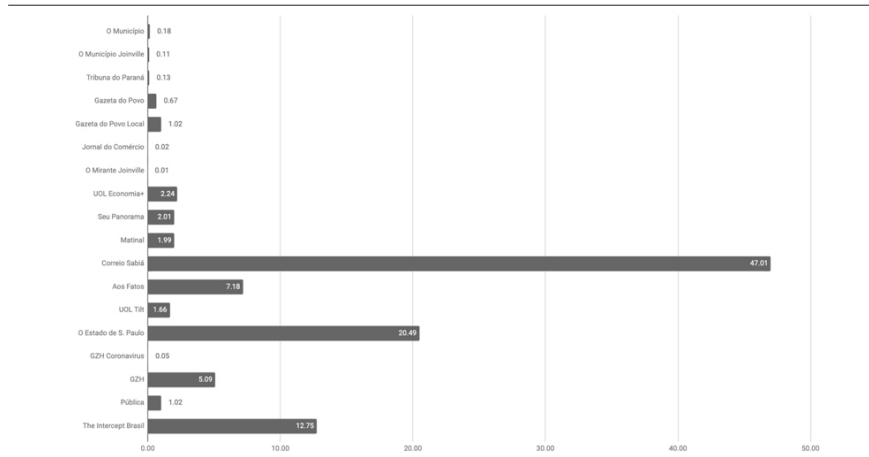
### 3.1.3. Use of multimedia formats

Only a minority of the channels in our sample systematically used multimedia formats. *UOL Tilt* was the only one that used images with some frequency (more than 30% of all messages). Videos were also rare, with *GZH* being the only one sending this format in more than 5% of its messages. Use of audio was more common, but it only became an integral part of the strategy for *Matinal* and *Panorama*, which aimed to make a product through which communication between the narrator and the user was direct and would give a sense of proximity.

### 3.1.4. Use of emojis

Experts seemed divided on the institutional use of these icons in messages sent to readers via WhatsApp. Half of the 18 channels, on average, used not more than one emoji per message; four channels sent a moderate number of emojis (between one and two) per message; while another five channels could be considered frequent emoji users, with an average of more than five such icons per message. The average number of emojis sent by Brazilian publishers was 1.65 per message, and the publisher that sent the most was *Correio Sabidá*, with an incredible average of 47 emojis per message (dataset COMP) (Figure 3).

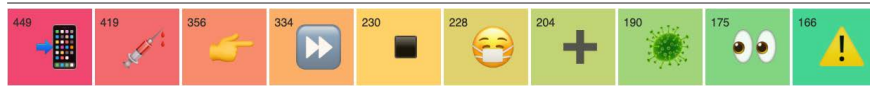
**Figure 3.** Average number of emojis per message sent by news outlets



Source: Authors' own based on the analysis of dataset COMP.

The main emojis used in the sample give a hint of the main topic in the sample: three of the top ten most popular icons (the needle, the masked face and the virus) were related to the COVID-19 pandemic (Figure 4).

**Figure 4.** Top ten most frequently used emojis by the 18 channels analyzed

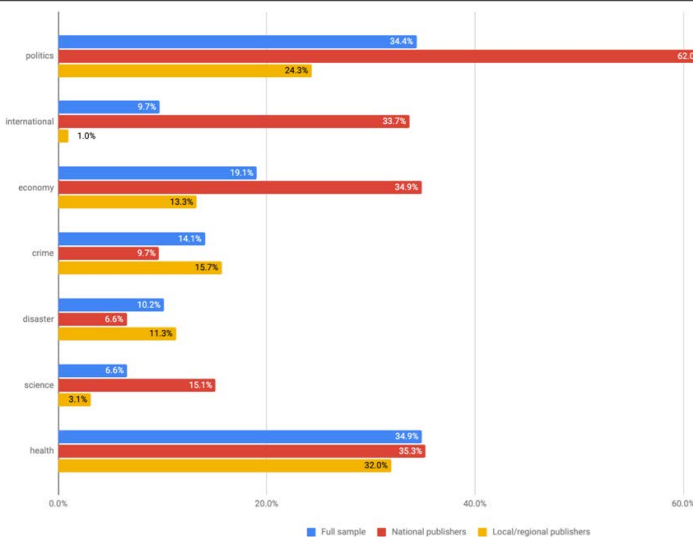


Source: Authors' own based on the analysis of dataset COMP.

### 3.1.5. Main news subjects

Our human-coded content analysis showed that the subjects most frequently addressed by the cases in our sample in the selected period on both platforms were, indeed, public affairs: *health* (34.9% of all the messages in dataset HUM), *politics* (34.4%) and *economy* (19.1%). We also noticed a high frequency of subjects such as crime (14.1%) and disaster (10.2%), but this was less a reflection of publishers' attempt to reduce the news gap identified by Boczkowski and Mitchelstein (2013) and more a finding related to the higher number of messages from local and regional publishers in the sample. In an attempt to compensate for this discrepancy, we also performed an analysis according to the reach of each publisher (local or national). As expected, we found that there was a very significant variation in the types of content prioritized by local and national publishers, with the exception of *health*, which remained a relatively constant topic of interest for all media in our sample (Figure 5).

**Figure 5.** Percentage of messages containing each topic on news channels analyzed



Source: Authors' own based on the analysis of dataset HUM.

### 3.2. The adaptation to WhatsApp for interpersonal communication and audience engagement

In their interviews, several editors and executives praised the possibility of directly connecting and engaging with their readers on WhatsApp without the mediation of algorithms. In practice, though, interpersonal communication with audiences through WhatsApp seemed limited. *Tribuna do Paraná* was the only news outlet in our sample that had dedicated staff (actually a single person) to manage interactions with its readers through WhatsApp.

Audience participation was hardly incentivized on publishers' usual channels on WhatsApp. Not a single WhatsApp group opened space for interaction from end-users: only company admins were allowed to send messages, showing that, from the media point of view, these channels worked mostly for simple news distribution. A quick content analysis of the profile pages of these distribution channels showed that only four (*O Município*, *O Município Joinville*, *GZH* and *Correio Sabiá*) stated whether that phone number or even another one was available to receive communication from the audience on WhatsApp. Most of the channels omitted any information, while *Jornal do Comércio* and *O Mirante Joinville* stated that those channels served only for the news outlet to send messages: responses or calls from readers were not welcome (Figure 6).

**Figure 6.** Profile pages of news channels that provided a phone number to receive contact from users, or stated that the channel was for news distribution only and contact was not allowed



Source: Screenshots of the channels' profile pages on WhatsApp on May 20<sup>th</sup>, 2022.

Taking this into consideration, the result of our search in the human-coded data for phrases that could indicate any interest among journalists in interacting with readers was not surprising. Similarly to Boczek and Koppers (2020), only 121 out of 965 messages (12.6%) made any form of request for engagement (Figure 7). Just 14 (1.5% of the total) were solely focused on

stimulating engagement with the audience. Seven of the 18 channels analyzed (38.8%), though, sent a call for engagement in at least 70% of their messages. *GZH*, *The Intercept Brasil*, *Aos Fatos* and *UOL Economia+* had those kinds of requests in all of their messages sent to users. However, they did not seem to have many variations: usually, it was the same sentence accompanied by a link in every single message, which potentially had a limited effect.

We can see that the cases analyzed mostly stimulated basic forms of reception-oriented engagement, such as *promotion* (present in 53.7% of messages that contained a call to engagement) and *share* (52.9%). Production-oriented categories of audience engagement such as *crowdsourcing* and *questions* appeared in 17.4% and 8.3% of the messages containing calls to engagement, respectively – figures largely influenced by very specific cases such as *Aos Fatos*, which encouraged crowdsourcing in all its 21 news distribution messages selected for human codification, as it largely relied on the support of readers to collect rumors that were circulating on messaging apps; and *UOL Economia+*, which asked users several questions in eight of their 22 messages.

**Figure 7.** Stacked bar chart showing the percentages of messages sent with the purpose of distribution, distribution and engagement and only engagement



Source: Authors' own based on the analysis of dataset HUM.

### 3.3. Reasons for and constraints on the use of WhatsApp for news distribution and engagement with audiences

The main reason for publishers to use WhatsApp, according to our interviews, was improving news distribution and reaching audiences – especially after Facebook's algorithmic changes in 2018. However, since December 2019, when WhatsApp started limiting the use of any bulk messaging or automation tool,<sup>1</sup> it became virtually impossible for medium and large publishers to build a significant audience on the platform: whether on groups or broadcast lists, each message could be sent to a maximum of 256 users each

1. HAZARD OWEN, L. (2019, June 21). "As of December, publishers will be no longer allowed to send out newsletters on WhatsApp". *Nieman Lab*. Retrieved from <<https://www.niemanlab.org/2019/06/as-of-december-publishers-will-no-longer-be-allowed-to-send-out-newsletters-on-whatsapp/>>. March 23, 2022.

time. In the case of broadcast lists, reaching tens of thousands of readers would require a copy-pasting process that would have to be repeated hundreds of times, using user phone numbers that had already been registered on a single mobile device (groups do not have this requirement, but phone numbers remain public for each group member).

According to *The Intercept Brasil's* former director of social media, Juliana Gonçalves, the physical process of sending messages via the organization's more than 150 distribution lists, which had around 40,000 registered users on the platform, took half the working hours of a communication intern every day. The example is particularly significant because the online publisher, with over 600,000 followers on Facebook, 950,000 on Twitter and 1.2 million on Instagram, was the one that sent the least number of messages in our sample, with an average of only 0.3 texts per day (dataset COMP). The more messages, the greater the workload.

Because of its private nature, WhatsApp did not offer statistics about these messages, which is commonplace on open social media. Without analytics, uncertainties increased: respondents reported not being sure if all users subscribing to broadcast lists actually received the messages sent to them (the condition for users to receive them was to store the news organization's contact details on their devices). According to the interviews, bugs were also frequent, especially if publishers tried to use special text parameters such as bold and italics, or if they sent photos or videos.

WhatsApp's policies always seemed subject to change without prior notice or sufficient information, experts reported. This was more or less what happened with the December 2019 change: publishers read an official statement from WhatsApp in July, but it was ambiguous, and most editors and executives were unable to contact the platform through the usual official channels of communication they had with Facebook. No service was directly affected, since they were not using third-party tools. Anyway, a common feeling among respondents was that "WhatsApp was not meant for journalism".

Therefore, only emerging online and local publishers could actually use WhatsApp to reach larger audiences, i.e. in the tens of thousands, which for a news outlet like *O Município*, with just over 100,000 followers on its main Facebook page and not even 50,000 on the Joinville page, is already a significant number. Journalists from more established news players talked about "being where the people were" and providing their readers with a different product or service than usual to justify their presence on the platform. News organizations seemed, however, to be in a frequent wait for a measure from the platform that could facilitate their work or, eventually, could even completely prevent them from having a presence on the tool, as their distribution channels on WhatsApp were rarely promoted on their websites and official social media profiles.

## 4. Discussion and conclusion

### *4.1. Adaptation mostly at a technological level, and blame on the platform*

Literature showed a relatively homogeneous trend among several studies on the adoption of new technologies by newsrooms: adaptation occurred mostly at a technological level (i.e. through the utilization of different social media platforms for similar distribution purposes) but it generally was not followed by profound transformations in journalists' relationships with their audiences (Hermida, 2010; Lasorsa, Lewis and Holton, 2012; Ekdale et al., 2015; Boczek and Koppers, 2020). To a certain extent, the adaptation of Brazilian newsrooms to WhatsApp followed a similar path.

The adaptation to WhatsApp seemed already limited in terms of news distribution (RQ1): none of the channels analyzed completely took into account the news consumption habit of news snacking by users of mobile devices. News outlets showed a tweaked understanding of ubiquity on the platform, sending messages mostly when they assumed readers were awake and not at an inconvenient frequency. The length of the messages varied significantly, and formats were notoriously inspired by models already widely explored in the dissemination of content via email or social media. WhatsApp did not create, and news organizations did not adapt to, a new format such as the short videos/reels that have now become endemic on platforms like TikTok and Instagram. In terms of topics, Boczkowski and Mitchelstein (2013) suggested that journalists should relax the coverage of public affairs during periods of stability and reinforce it during times of crisis, when denser information is considered to play a key societal role. The editors of the channels analyzed seemed to have made an adequate reading of the moment they were in, during a peak phase of the COVID-19 pandemic, which therefore justifies a wider distribution of subjects such as health, politics and economics.

Using the attributes proposed by Rogers (2003) to explain why some innovations spread more quickly than others, it seems obvious that WhatsApp only provides a relative advantage for the distribution of news for a very small portion of publishers – usually local and/or emergent digital news natives – which were not able to take advantage of the incredible audiences that Facebook was able to deliver to the media until the algorithmic changes of 2018. News organizations noticed that the tool has a high level of complexity that makes it very difficult for newsrooms to fully adopt it. When some of the experts interviewed vented their frustrations with the platform by saying that “WhatsApp was not made for journalism”, they meant that the tool was incompatible with the practices and values of the profession, even though, initially, they had identified a great potential for it to perhaps replace Facebook in their distribution strategies. In summary, when we analyze the adoption of WhatsApp by newsrooms, it has rarely passed the two phases of innovation diffusion proposed by Rogers (2003), namely initiation and implementation.



Regarding (mostly production-oriented) audience engagement (RQ2), there seems to be a lack of consistency in the practices of news organizations using WhatsApp. *Tribuna do Paraná*, for example, did not encourage engagement even though it was the only news outlet that had a dedicated professional for interpersonal communication with users. Organizations that informed users about the possibility of contact on their profile pages failed to stimulate participation in the messages they sent; and the few who did encourage engagement, missed the point, as discussed above.

It seemed clear that WhatsApp was still not a tool that solved the biggest issue relating to audience participation in newsrooms: how to operate it cheaply or effortlessly with the limited journalistic workforce available. Once again, in Rogers' (2003) terms, if WhatsApp did provide a relative advantage over other tools because communication with readers on the messaging app did not face the hurdles of algorithm selection, it did not seem to have a sufficient level of compatibility with the needs of adopters in the newsrooms. In terms of audience engagement, the adoption of WhatsApp by newsrooms has not yet passed the initial phase despite widespread testing: while the issue that demands innovation was identified, the media could hardly consider that WhatsApp matched their needs for direct communication with users.

### Bibliographical references

- AGUR, C. (2019). "Insularized Connectedness: Mobile Chat Applications and News Production". *Media and Communication*, 7 (1), 179-188.  
<<https://doi.org/10.17645/mac.v7i1.1802>>
- ANGELUCI, A.C.B., SCOLARI, G. and DONATO, R. (2017). "O WhatsApp como Actante: O Impacto do Aplicativo Interativo em Redações Jornalísticas". *Mediação*, 19 (24), 195-214. Retrieved from <<https://docplayer.com.br/74793267-O-whatsapp-como-actante-o-impacto-do-aplicativo-interativo-em-redacoes-jornalisticas.html>>
- BOCZEK, K. and KOPPERS, L. (2020). "What's New about Whatsapp for News? A Mixed-Method Study on News Outlets' Strategies for Using WhatsApp". *Digital Journalism*, 8 (1), 126-144.  
<<https://doi.org/10.1080/21670811.2019.1692685>>
- BOCZKOWSKI, P.J. and MITCHELSTEIN, E. (2013). *The News Gap: When the Information Preferences of the Media and the Public Diverge*. Cambridge, Massachusetts: MIT Press.
- BUCY, E.P. and NEWHAGEN, J.E. (2004). *Media Access: Social and Psychological Dimensions of New Technology Use*. London: Lawrence Erlbaum Publishers.
- CORNIA, A., SEHL, A., LEVY, D.A.L. and KLEIS NIELSEN, R. (2018). *Private Sector News, Social Media Distribution, and Algorithm Change*. Reuters Institute for the Study of Journalism. Retrieved from <<https://reutersinstitute.politics.ox.ac.uk/our-research/private-sector-news-social-media-distribution-and-algorithm-change>>
- COSTERA MEIJER, I. (2007). "The Paradox of Popularity". *Journalism Studies*, 8 (1), 96-116.  
<<https://doi.org/10.1080/14616700601056874>>

- DIMMICK, J., FEASTER, J.C. and HOPLAMAZIAN, G.J. (2011). "News in the interstices: The niches of mobile media in space and time". *New Media & Society*, 13 (1), 23-39.  
<<https://doi.org/10.1177/1461444810363452>>
- EKDALE, B., SINGER, J.B., TULLY, M. and HARMSSEN, S. (2015). "Making Change: Diffusion of Technological, Relational, and Cultural Innovation in the Newsroom". *Journalism & Mass Communication Quarterly*, 92 (4), 938-958.  
<<https://doi.org/10.1177/1077699015596337>>
- FARES, F. (2018). "WhatsApp y periodismo: Análisis del uso de WhatsApp en los medios de información españoles". *Hipertext.net*, 16, 78-92.  
<<https://doi.org/10.31009/hipertext.net.2018.i16.12>>
- GUERRERO, M.A. and MÁRQUEZ-RAMÍREZ, M. (2014). *Media Systems and Communication Policies in Latin America*. London: Palgrave Macmillan.
- HERMIDA, A. (2010). "Twittering the News: The Emergence of Ambient Journalism". *Journalism Practice*, 4 (3), 297-308.  
<<https://doi.org/10.1080/17512781003640703>>
- JENKINS, J. and NIELSEN, R.K. (2018). *The digital transition of local news*. Oxford: Reuters Institute for the Study of Journalism. Retrieved from <<https://ora.ox.ac.uk/objects/uuid:f1f8876e-a100-4c20-9f87-3f380630fe92>>
- KARNOWSKI, V., VON PAPE, T. and WIRTH, W. (2011). "Overcoming the Binary Logic of Adoption: On the Integration of Diffusion of Innovations Theory and the Concept of Appropriation". In: VISHWANATH, A. and BARNETT, G.A. (Eds.). *The Diffusion of Innovations; A Communication Science Perspective*. New edition. New York: Peter Lang Us.
- LASORSA, D.L., LEWIS, S.C. and HOLTON, A.E. (2012). "Normalizing Twitter". *Journalism Studies*, 13 (1), 19-36.  
<<https://doi.org/10.1080/1461670X.2011.571825>>
- LAWRENCE, R.G., RADCLIFFE, D. and SCHMIDT, T.R. (2018). "Practicing Engagement". *Journalism Practice*, 12 (10), 1220-1240.  
<<https://doi.org/10.1080/17512786.2017.1391712>>
- LIEVROUW, L.A. and LIVINGSTONE, S. (2010). "Introduction to the First Edition (2002): The Social Shaping and Consequences of ICTs". In: *Handbook of New Media: Social Shaping and Social Consequences of ICTs*. Updated Student Edition. London: SAGE Publications Ltd, 15-32.  
<<https://doi.org/10.4135/9781446211304>>
- MICÓ, J.L., MASIP, P. and DOMINGO, D. (2013). "To wish impossible things\*: Convergence as a process of diffusion of innovations in an actor-network". *International Communication Gazette*, 75 (1), 118-137.  
<<https://doi.org/10.1177/1748048512461765>>
- MOLYNEUX, L. (2018). "Mobile news consumption: A habit of snacking". *Digital Journalism*, 6 (5), 634-650.  
<<https://doi.org/10.1080/21670811.2017.1334567>>
- NEGREIRA-REY, M.-C., LÓPEZ-GARCÍA, X. and LOZANO-AGUIAR, L. (2017). "Instant Messaging Networks as a New Channel to Spread the News: Use of WhatsApp and Telegram in the Spanish Online Media of Proximity". In: ROCHA, Á. et al. (Eds.). *Recent Advances in Information Systems and Technologies*. Cham: Springer International Publishing (Advances in Intelligent Systems and Computing), 64-72.  
<[https://doi.org/10.1007/978-3-319-56541-5\\_8](https://doi.org/10.1007/978-3-319-56541-5_8)>

- NELSON, J. L. (2018). “The elusive engagement metric”. *Digital Journalism*, 6 (4), 528-544.  
<<https://doi.org/10.1080/21670811.2018.1445000>>
- (2021). “The next media regime: The pursuit of ‘audience engagement’ in journalism”. *Journalism*, 22 (4), 2350-2367.  
<<https://doi.org/10.1177/1464884919862375>>
- NEWMAN, N. et al. (2021). *Digital News Report 2021*. Oxford: Reuters Institute for the Study of Journalism. Retrieved from <<https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021>>
- REICH, Z. (2013). “The Impact of Technology on News Reporting: A Longitudinal Perspective”. *Journalism & Mass Communication Quarterly*, 90 (3), 417-434.  
<<https://doi.org/10.1177/1077699013493789>>
- ROGERS, E.M. (2003). *Diffusion of Innovations*. 5th edition. New York: S & S International.
- STRUCKMANN, S. and KARNOWSKI, V. (2016). “News consumption in a changing media ecology: An MESM-study on mobile news”. *Telematics and Informatics*, 33 (2), 309-319.  
<<https://doi.org/10.1016/j.tele.2015.08.012>>
- VAN DAMME, K. et al. (2015). “What’s APPening to news? A mixed-method audience-centred study on mobile news consumption”. *Mobile Media & Communication*, 3 (2), 196-213.  
<<https://doi.org/10.1177/2050157914557691>>
- VAN ROSSUM, G. (1995). *Python tutorial, Technical Report CS-R9526*. Amsterdam: Centrum voor Wiskunde en Informatica (CWI). Retrieved from <<https://ir.cwi.nl/pub/5007/05007D.pdf>>