

## ORIGINAL ARTICLE



# The Impact of ChatGPT on Journalism: Social Listening, Bibliographic Production, and Media Agenda

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*L'impacte de ChatGPT en el periodisme: escolta social, producció bibliogràfica i agenda mediàtica*

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## Abstract

Considering the powerful emergence of *ChatGPT* in society at large and in journalism in particular, this study aims to quantify the impact of *ChatGPT* on journalism from the perspective of news generation on this topic, its repercussions on social networks, and its impact on the academic sphere. This study quantitatively analyzes the impact of *ChatGPT* on journalism from its launch on 30 November 2022 to 18 November 2023. It examines news coverage, Wikipedia visits, social media posts (Facebook, Instagram, and X), and academic output. Data was collected from *Media Cloud*, *Wikipedia*, and *Proquest*. Results were generated in *Flourish Studio*, and analysis included normalization of records to avoid duplicates and ensure relevance of scholarly output. The analysis of diverse documents underscores the versatility of the technology and the growing intersection between automation and journalistic writing. The study anticipates a future of increased human-machine collaboration in journalism. Key findings indicate widespread global coverage of the topic, reflecting a commensurate audience interest, as evidenced by internet search logs and social conversations.

## Keywords

*ChatGPT*; journalism; media coverage, artificial intelligence, social listening

## Resum

Tenint en compte la poderosa irrupció de *ChatGPT* en la societat en general i en el periodisme en particular, aquest estudi té com a objectiu quantificar l'impacte de *ChatGPT* en el periodisme des de la perspectiva de la generació de notícies sobre aquest tema, les seves repercussions a les xarxes socials i el seu impacte en l'àmbit acadèmic. Aquest estudi analitza quantitativament l'impacte de *ChatGPT* en el periodisme des del seu llançament, el 30 de novembre de 2022, fins al 18 de novembre de 2023. Examina la cobertura mediàtica, les visites a *Wikipedia*, les publicacions a xarxes socials (*Facebook*, *Instagram* i *X*) i la producció acadèmica. Les dades es van recollir de *Media Cloud*, *Wikipedia* i *ProQuest*. Els resultats es van generar amb *Flourish Studio*, i l'anàlisi va incloure la normalització dels registres per evitar duplicats i assegurar-ne la rellevància per a la producció acadèmica.

L'anàlisi de diversos documents posa de manifest la versatilitat d'aquesta tecnologia i la creixent intersecció entre l'automatització i l'escriptura periodística. L'estudi preveu un futur amb una major col·laboració entre humans i màquines en el periodisme. Les principals troballes indiquen una àmplia cobertura global del tema, reflectint un interès proporcional de l'audiència, tal com demostren els registres de cerques a internet i les converses socials.

## Paraules clau

*ChatGPT*, periodisme, cobertura mediàtica, intel·ligència artificial, escolta social

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# 1. Introduction

AI has been part of journalism for more than a decade, with newspapers such as *The Guardian* using bots for its digital strategy in 2011 (Gonzalez, 2011), and the *LA Times* creating news briefs for social networks in 2014 (Oremus, 2014). This rapid process has impacted all areas of journalism due to the deep penetration of technology, leading to advances in creative processes with advertising, one of the main sources of revenue for global media (Barrat, 2013; Broussard *et al.*, 2019; Burrell, 2016; Carlson, 2015; Pérez-Seijó *et al.*, 2020).

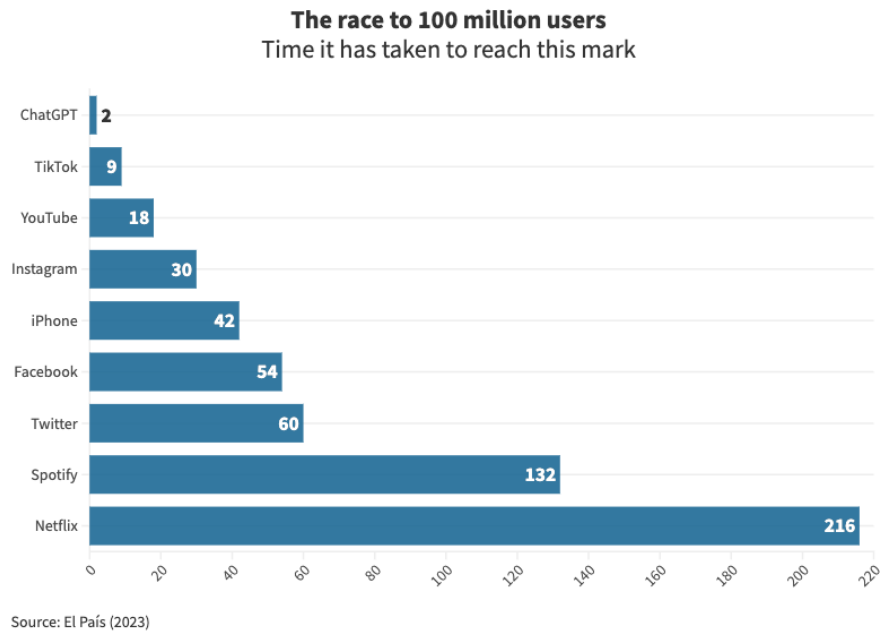
Media outlets have readily incorporated AI into language processing, social listening, and automated content creation, making it a crucial resource for various routines and processes. AI has had a positive impact on journalism through Big Data analysis, basic task coverage, and automated copywriting (Canavilhas, 2022; De-Lima-Santos *et al.*, 2022; Túnnez *et al.*, 2019).

However, the global interest in AI, exemplified by *ChatGPT*, raises ethical challenges and concerns about generative AI, especially the potential degradation of news quality and increased misinformation (Guzmán *et al.*, 2023; Montoro-Montarroso *et al.*, 2023; Salaverriá *et al.*, 2020; Sidorenko *et al.*, 2021; Túnnez *et al.*, 2018). The biggest challenge is to manage the significant increase of information in digital social networks and platforms, as users-prosumers tend to access news before the media and journalists, without the corresponding rigor (Expósito and Trillo, 2023; Parrat *et al.*, 2021).

## 1.1. ChatGPT and the rise of generative AIs

Generative AI, which autonomously creates content like images, video, or text upon user request, has been applied in journalism for news creation, search engine improvement, personalization, and verification to enhance work routines (Döpfner, 2023). ChatGPT, a prominent figure in this technology ecosystem since late 2022, was made publicly available in an intuitive, accessible manner, facilitating its rapid adoption by internet users and acting as a catalyst in education and training. It achieved a record of 100 million users in two months, a feat that took years for other platforms (Figure 1).

Figure 1. Time, in months, it has taken various platforms and technologies to reach 100 million users



Source: *ChatGPT Impact Project* (<https://chatgptimpact.com>).

*ChatGPT* is a large language model created by OpenAI through AI techniques like deep learning, neural networks, and natural language processing. It can form coherent sentences and hold conversations with users, exhibiting enough autonomy and capability to act in a way that seems human. However, despite the impression it may leave, it has also been noted for significant inaccuracies in its responses, sometimes even inventing them, which is anthropomorphically referred to as "hallucinations" (Jiao *et al.*, 2023; Shahriar and Hayawi, 2023).

Like all generative artificial intelligence, the use and contribution of *ChatGPT* are diverse and cater to various professional and personal interests. According to Shahriar and Hayawi (2023), these include:

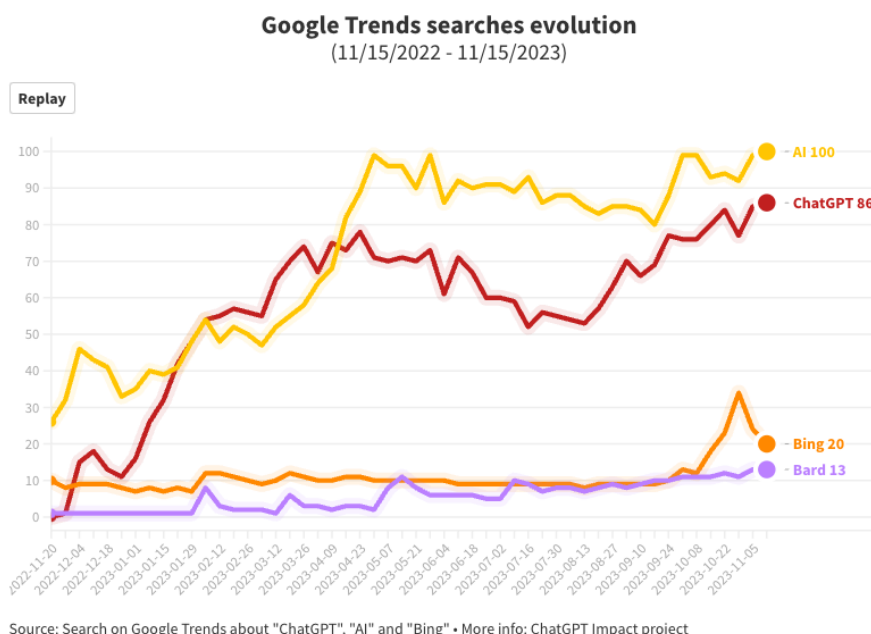
- Healthcare: to provide answers to general or basic consultation questions.
- Education: development of pedagogical support materials, plagiarism detection, language learning reinforcement, and creation of didactic and creative materials.
- Research: in academia, they can aid in writing processes, translation, material compilation, graphic and support resource creation, as well as data and text mining.

- Computer programming: for code development and execution, as well as performance testing.
- Journalism: for creating written and graphic content, plagiarism detection, verification, and simplifying professional routines.

*ChatGPT* has proven valuable in academia and science for sourcing and classifying information (Lopezosa et al., 2023). However, these technologies also pose ethical and privacy concerns, including potential bias, user misuse, and personal data misuse (Lomas, 2023; Pollina & Armellini, 2024). There has been significant interest from the public and tech actors from 2022 to 2023 (Adams, 2023; Cragg, 2023).

Google Trends data shows "ChatGPT" interest is like "AI" and higher than "Bing" or "Bard". *Bing*, a Microsoft search engine, has integrated GPT-4 technology, sparking interest. *Bard*, a Google chat tool, is trying to compete with *ChatGPT* but with less success.

Figure 2. Google searches for the terms "AI," "ChatGPT," "Bing," and "Bard" between November 15, 2022, and November 15, 2023



Source: ChatGPT Impact Project ([www.chatgptimpact.com](http://www.chatgptimpact.com)).

It should be noted that in the case of *Bing* and *Bard*, their names were modified when other more evolved language models were developed, thus being replaced in 2024 by *Microsoft Copilot* and *Gemini* respectively.

## 1.2. Generative AIs and ChatGPT in journalism

Currently, we can see AI integrated into media newsrooms, not only in the production of news but also in distribution and, finally, in the process of collecting them (Beckett and Yaseen, 2023). The integration of artificial intelligence, especially generative ones like *ChatGPT*, in the field of journalism has shown value and utility in automating mechanical processes, rewriting texts, data analysis, and even as a creator of content ideas. In most cases, the real impact involves a significant reduction in the time

associated with these tasks and greater flexibility and agility in the processes (Gutiérrez-Caneda, Vásquez-Herrero, and López-García, 2023).

The integration of artificial intelligence in journalism has evolved significantly over the past decade, encompassing various forms of automation and data analysis. Early applications of AI focused on automating mechanical tasks, such as rewriting texts, analyzing data, and assisting with trend detection through tools like *CrowdTangle* and *RapidMiner*. These resources provided newsrooms with powerful methods for social listening and data mining, enabling journalists to discover and curate information more efficiently (Beckett and Yaseen, 2023).

However, these initial tools were not generative in nature but served as a foundation for integrating AI into journalistic practices. Generative AI tools, exemplified by *ChatGPT*, mark a significant shift by directly creating content, such as written articles, interview summaries, and personalized news outputs. This transition represents a leap from tools that supported journalistic workflows to those capable of producing original outputs, fundamentally altering editorial processes.

*ChatGPT*'s introduction in late 2022 further disrupted traditional practices. Its accessibility and adaptability quickly positioned it as a valuable resource for generating ideas, automating copywriting, and enhancing editorial agility. Unlike its predecessors, generative AI enables a more profound transformation of journalistic routines, reducing time associated with creative tasks and offering unprecedented flexibility in content production (Diez-Gracia *et al.*, 2023; Tejedor, 2023).

This evolution underscores the growing reliance on AI in journalism, where generative tools build on the capabilities of earlier automation technologies, paving the way for greater integration of human-machine collaboration in the profession (Beckett and Yaseen, 2023).

Trend detection and social listening are of utmost importance for journalism due in part to prosumer audiences (Papacharissi, 2012) and the increased flow of information susceptible to misinformation (Damián *et al.*, 2020; Pérez-Escoda *et al.*, 2021). It should be noted that the information derived from this directly influences better audience segmentation and their interests (Matellanes, 2011), which impacts a better and even greater connection between the media and the audience, thus preserving the sustainability of the media and journalists through subscriptions and communities based on value-added content, increased participation, differentiated experiences, and platformization (Sidorenko *et al.*, 2020).

Although these resources have been part of some newsrooms for several years, as previously mentioned, *ChatGPT* has represented a disruptive element in the understanding and widespread adoption of this technology, with communication being one of the most impacted areas (Guerrero and Ballester, 2023).

According to Nafría (2023), *ChatGPT* has been a significant milestone in the media industry, given its potential to simplify and optimize journalistic content based on the analysis of vast amounts of data, interview transcriptions, text summarization, as well as content categorization and classification. However, in contrast, this resource is associated with the proliferation of fake sites that use it to generate or copy texts from real media, as well as to supplant the work of certain professionals and generate false or speculative content.

This view aligns with the findings of the study by González-Arias and López-García (2023), who, after interviewing various professionals in the journalistic field, indicate that *ChatGPT* indeed represents a significant technological milestone, despite the opacity surrounding it, particularly regarding the differentiation and proposition of reliable or false data, as well as the consulted sources, highlighting biases (political, social, etc.) in the proposed content (a problem inherited from its machine learning).

González-Arias and López-García (2023) argue that AI, especially *ChatGPT*, has become a topic of international public interest and, correspondingly, a focus of interest for media and journalists. However, the use of AI in journalism also entails significant risks. Journalists have perceived risks such as the inaccuracy of AI and the lack of "empathy". Concern also revolves around the predominance of more repeated content and ideas over the less common ones, regardless of their veracity or importance, potentially leading to a situation of "tyranny of the majority". Additionally, some believe that the use of AI should be regulated regarding these issues (Gutiérrez-Caneda, Vásquez-Herrero, and López-García, 2023).

According to these authors, the main limitations and warnings to consider include technical elements such as inaccuracies in the provided information, lack of involvement with a specific topic, and potential emphasis on commonplace ideas.

### 1.3. Objectives

Considering the powerful emergence of *ChatGPT* in society at large, and in journalism in particular, this study aims to quantify the impact of *ChatGPT* on journalism, from the perspective of news generation on this topic, its repercussions on social networks, and in the academic sphere.

The specific objectives of this research are:

- Analyzing the evolution in news generation, social media echo, and bibliographic production regarding *ChatGPT*, highlighting the trend from the launch of this tool at the end of 2022 until November 2023.
- Identifying the main events related to a greater presence in media and social networks of publications about *ChatGPT*.
- Discussing the scope of this phenomenon and proposing specific measures and actions to promote transparency and best practices in journalism, regarding the use of AI tools, particularly *ChatGPT*, in this profession.

## 2. Methodology

This research conducts a quantitative descriptive analysis of various parameters related to the impact of *ChatGPT* on journalism. The timeframe analyzed spans from November 30, 2022, the launch date of the chatbot, until November 18, 2023. The intention was to capture a full year of the tool's lifecycle to comprehensively evaluate its impact. However, challenges in accessing consistent data across all platforms made it impossible to maintain this timeframe for all indicators. For example, data collection from platform "X" was discontinued in June 2023 due to API restrictions, and bibliographic production data extended to November 27, 2023, to include relevant academic publications. These variations in the temporal scope are detailed below.

The analyzed variables are:

- news coverage;
- visits on *Wikipedia*, and proportion relative to the total of news, by language;
- posts on *Facebook*, *Instagram*, and *X* (formerly *Twitter*);
- academic publications according to document types.

The data collection for the different indicators was carried out from various platforms:

- News coverage and media attention, through data provided by the *Media Cloud Search* platform. The number of news articles, as well as the proportion within the total count, comes from a selection of digital media outlets in the United States (English and Spanish language media), Canada, United Kingdom, Japan, India, China, Russia, France, Germany, Italy, Portugal, Spain, Brazil, and Mexico.
- Visits to *Wikipedia*, regarded as an indicator of social interest, understand that this digital encyclopedia is a common reference tool, not only for journalists but also for audiences interested in further exploration, often stemming from reading news and reports about the tool in media outlets.
- Impact on social media: Data was collected from Facebook and Instagram, as the most representative and widely used social media platforms, as well as *X* (formerly *Twitter*), due to its impact in the public sphere. Although *Twitter* announced restrictions on API access in February 2023, the use of third-party tools, such as *T-Hoarder*, enabled the collection of data from *X* until June 2023. Therefore, the temporal scope for *X* data extends until June 1, 2023.
- Academic publications, media coverage, and bibliographic production: Data was collected from the *ProQuest* platform, which indexes over 90,000 authoritative sources, primarily in English. This platform was chosen for its capacity to consolidate information from news, academic articles, and other materials into a single data source, effectively highlighting the growing interest in *ChatGPT* across diverse domains of society. It should be noted that this source primarily gathers information published in English, which may bias the results towards this language. The search was conducted in the "Communication" field, covering the period from November 30, 2022, to November 27, 2023, the latter date coinciding with the start of the article's writing process. To capture the greatest number of results, the search was expanded to include:

title(Journalism) OR abstract(Journalism) OR subject(Journalism) OR main subject(Journalism) OR title(Communication) OR abstract(Communication) OR subject(Communication) OR main subject(Communication) OR title(media) OR abstract(media) OR subject(media) OR main subject(media) OR title(news) OR abstract(news) OR subject(news) OR main subject(news) OR title(Reporting) OR abstract(Reporting) OR subject(Reporting) OR main subject(Reporting). Additionally, a specific search strategy was employed to identify publications related to generative technologies and *ChatGPT*, using the following terms: title(ChatGPT) OR abstract(ChatGPT) OR subject(ChatGPT) OR main subject(ChatGPT) OR title(Chat GPT) OR abstract(Chat GPT) OR subject(Chat GPT) OR main subject(Chat GPT).

This focus on *ChatGPT* was chosen because, up to the date of the search, no significant academic publications had been identified regarding other competing generative tools. The obtained data was normalized by manually reviewing the exported records to ensure the quality and relevance of the information. *Zotero* (version 6.0.26) was used to merge duplicate records by comparing titles, authors, and publication dates. Additionally, irrelevant

records were excluded after reviewing their titles and abstracts. For the categorization process, the *ProQuest* database itself provides a detailed classification by source type (e.g., academic articles, reports, or news items), which was used to streamline the identification and selection of relevant academic production. The categorization process prioritized academic sources with a focus on the impact of these technologies in media and communication. This normalization and categorization process was carried out by one of the authors (RAR), consulting with the other co-authors in cases where doubts arose regarding the classification of certain records.

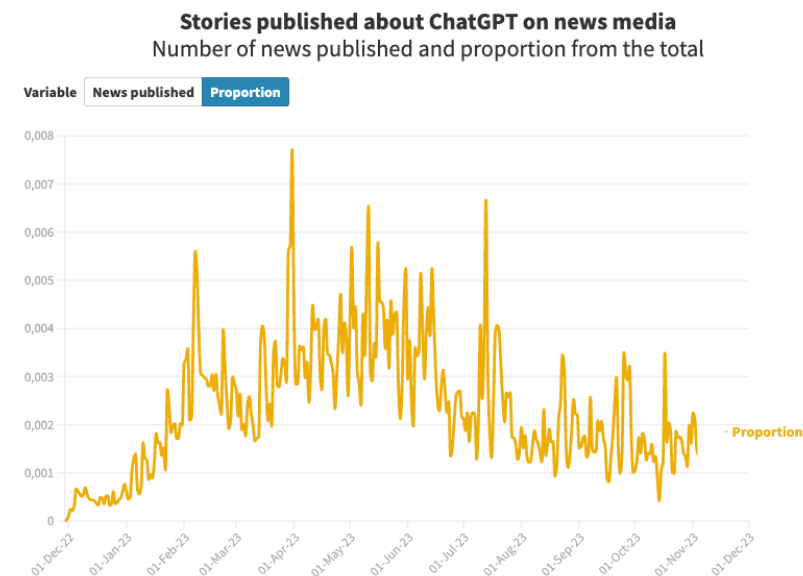
The generation of results and figures was carried out using *Flourish Studio*. These figures can be interactively accessed at <https://public.flourish.studio/story/1844005/>

## 3. Results

### 3.1. Objectives

Visits to *ChatGPT*'s *Wikipedia* page can serve as a valuable metric to measure its social impact and the media attention it receives. *Wikipedia*, being one of the leading sources of information online, often acts as a first port of call for those seeking to better understand a new or current topic. Therefore, an increase in the number of visits to a specific *Wikipedia* page may indicate a growth in public interest and awareness of that topic, which is also incurred by media and journalists.

Figure 3. Stories published about "ChatGPT" (proportion from the total) on news media, between December 5, 2022, and November 18, 2023.



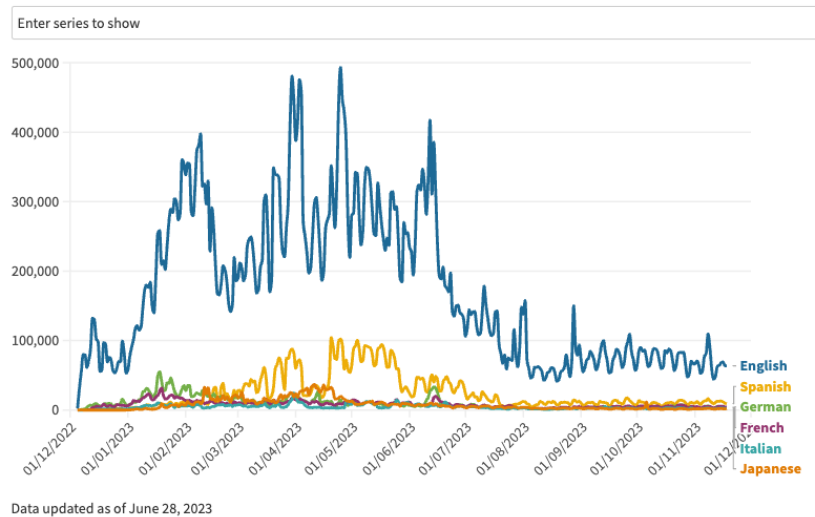
Source: *ChatGPT Impact Project* (<https://chatgptimpact.com>).

In the case of *ChatGPT*, a spike in visits could reflect key events in its development, significant media coverage, or a growing interest and curiosity of the public about AI technology and its applications. This data is shown in Figures 3 and 4.

Figure 4. Visits to *Wikipedia* entries on "ChatGPT", in different languages, between December 5, 2022, and November 18, 2023.



**Wikipedia entry 'ChatGPT' views**  
(12/5/2022 - 11/18/2023)



Source: ChatGPT Impact Project ([www.chatgptimpact.com](http://www.chatgptimpact.com)).

There are key moments in *ChatGPT*'s history, such as its launch in December 2022 or reaching 100 million users in January 2023, that correlate with an increase in Wikipedia visits, indicating a link between the tool's development, public adoption, and interest. The launch of *ChatGPT Plus* and its applications in March, and a spike in US traffic in August 2023, suggest a growing interest in its academic applications.

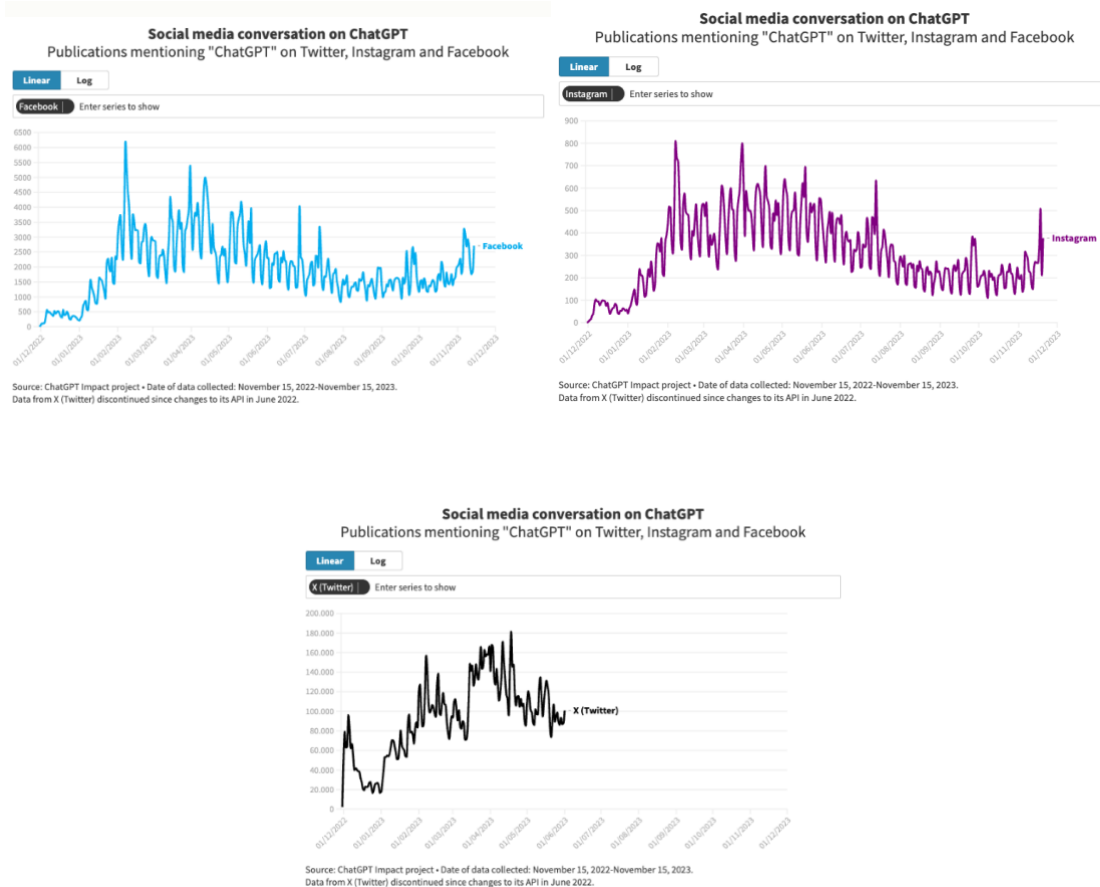
Traffic increases on the *ChatGPT Wikipedia* page are more prominent in English, possibly due to key events, media coverage, or integration into popular platforms. This demonstrates the rapid adoption of the tool in the English-speaking world. Spikes in other languages are less pronounced, possibly due to lower awareness, different media coverage, or translation delays. This reflects not only differences in adoption and interest but also opportunities for further dissemination and localization of *ChatGPT* in English.

Although *Google* and especially *Wikipedia* are usually the first instance of the search for many internet users, currently the youngest segments are modifying their habits of use and digital consumption, resorting to platforms and social networks to directly carry out searches and queries, thus dispensing with conventional search engines and web browsers, which reinforces the importance of expanding observation towards the so-called social listening, which refers to what is said and how it is said through networks.

### 3.2. Conversation in social networks

Data on mentions of *ChatGPT* on social networks such as *Twitter*, *Facebook*, and *Instagram* show how the tool has captured attention on these platforms. Just after the launch of *ChatGPT* in November 30, 2022, there was a significant increase in mentions, especially on *Twitter*, indicating strong initial interest. This pattern of increased attention on social networks presumably correlates with spikes in *Wikipedia* page views and media coverage at key moments, such as the launch of *ChatGPT Plus* and mobile apps. This data highlights how social networks play a crucial role in the diffusion and popularization of emerging technologies such as *ChatGPT*.

Figures 5, 6 and 7. Social media conversation on "ChatGPT" through *Twitter*, *Instagram*, and *Facebook*, between November 15, 2022, and November 1, 2023



Source: *ChatGPT Impact Project* (<https://chatgptimpact.com>).

Social media data reveals distinct trends in the discussion of ChatGPT on different platforms:

- *X (formerly Twitter)*: This social network shows the highest volume of *ChatGPT* mentions, reflecting its prominent role as a platform for technology and topical discussions. The notable spike just after the launch of *ChatGPT* suggests a rapid spread of information and strong interest in this new technology.
- *Facebook*: Although mentions on *Facebook* are considerably lower than on *Twitter*, they still reflect significant interest. This pattern could indicate a more focused discussion in specific groups or communities interested in technology and AI.
- *Instagram*: Mentions on *Instagram* are the lowest, which could be due to the nature of the platform, which is less focused on discussions of technology topics and more on visual and lifestyle content.

However, the web in general and social networks are not the only means through which *ChatGPT* has gained visibility and relevance. The publishing world and the media have also been enthusiastic about this phenomenon, reporting a notable increase in works and studies published on the subject, as well as a great coverage on the subject from various perspectives of social, political, economic and technological interest.

### 3.3. Bibliographic production and media coverage

The research results reveal a wide diversity in the type of documents related to *ChatGPT*'s impact on journalism. Most of the publications are classified as "News", with a significant total of 18,532 documents. This finding highlights the relevance and presence of *ChatGPT* in the news arena. In other words, the "News" category prevails over the entire news spectrum on the subject during its first year, as shown in Table 1.

Table 1. 30 first records related to *ChatGPT* in the categories "Content-Type" and "Subject" between November 30, 2022, and November 27, 2023.

| <b>Content-type</b>                | <b>Records</b> | <b>Subject</b>              | <b>Mentions</b> |
|------------------------------------|----------------|-----------------------------|-----------------|
| News                               | 18,532         | Chatbots                    | 8,626           |
| Working papers/preliminary edition | 1,685          | Artificial intelligence     | 8,032           |
| Blog                               | 1,457          | Students                    | 1,090           |
| Original articles                  | 673            | Social networks             | 1,031           |
| Article                            | 525            | Language                    | 969             |
| Commentary                         | 334            | Search engines              | 923             |
| Transcription                      | 186            | Large language models       | 917             |
| General information                | 73             | Software                    | 847             |
| Editorial                          | 68             | Automation                  | 828             |
| Correspondence                     | 57             | Startups                    | 662             |
| Case study                         | 47             | Machine learning            | 557             |
| Report                             | 47             | Education                   | 541             |
| Letter to the Editor               | 33             | Learning                    | 538             |
| Audio/video clip                   | 23             | Writing                     | 520             |
| Conference proceedings             | 13             | Employees                   | 513             |
| Instructional material/guideline   | 11             | Algorithms                  | 511             |
| Interview                          | 10             | Internet                    | 505             |
| Book                               | 7              | Privacy                     | 481             |
| Book chapter                       | 6              | Natural language processing | 471             |
| Correction                         | 6              | Employment                  | 455             |
| Evidence-based health care         | 5              | Plagiarism                  | 417             |
| Overview/Review                    | 5              | False information           | 381             |
| Appendices                         | 2              | Digital currencies          | 376             |
| Dissertation/Thesis                | 2              | Teaching                    | 352             |
| Literature review                  | 1              | Teachers                    | 340             |

Source: prepared by the authors based on the results obtained in Figure 9.

In addition, there is a considerable presence in "Working papers/preliminary edition" (1,685), mainly from the academic repository *arXiv* (1,594 documents) and "Blog" (1,457), suggesting active scholarly interest and discussion on online platforms.

Regarding the "Journal Articles" section, it also contributed significantly with 673 papers, underscoring the depth of exploration and analysis in the scholarly literature. The predominant journals belong to the medical field (Cureus, with 42 publications; Annals of Biomedical Engineering, with 29; and Aesthetic Surgery Journal, with 17), while there is little to no presence of academic journals from the fields of

communication or journalism. However, these data may be influenced by a bias in the data source towards the health care field, to the detriment of the social sciences.

On the other hand, the results reveal a wide variety of topics related to the impact of *ChatGPT* on journalism. "Chatbots" and "artificial intelligence" are the predominant areas with 8,626 and 8,032 mentions respectively, indicating a strong focus on automation and technology in journalistic discussion. In addition, the significant presence of terms such as "social networking," "large language models," and "natural language processing" highlights *ChatGPT*'s influence in the sphere of social networking and written content production. The table reflects *ChatGPT*'s intersection with diverse topics such as education, ethics, computer security, and AI, underscoring the breadth of this technology's impact on today's journalistic landscape.

It is worth noting that 75% of the retrieved documents were published in English (17,380), 18.5% in Spanish (4,582 documents), and 5.1% in Portuguese, with other languages accounting for residual percentages. However, in the ranking of media that have published the most on the subject, the first reference is in Spanish.

Data specifically related to media coverage through the *ProQuest* tool (Table 2) has made it evident that of the recognized media with global reach *CE Noticias Financieras* stands out as the one that has published the most articles and news about *ChatGPT* during the first year of operation of this AI (6,164 contents), followed by *Business Insider* (financial news) (1,350 contents) and *AMB Crypto* (516 contents).

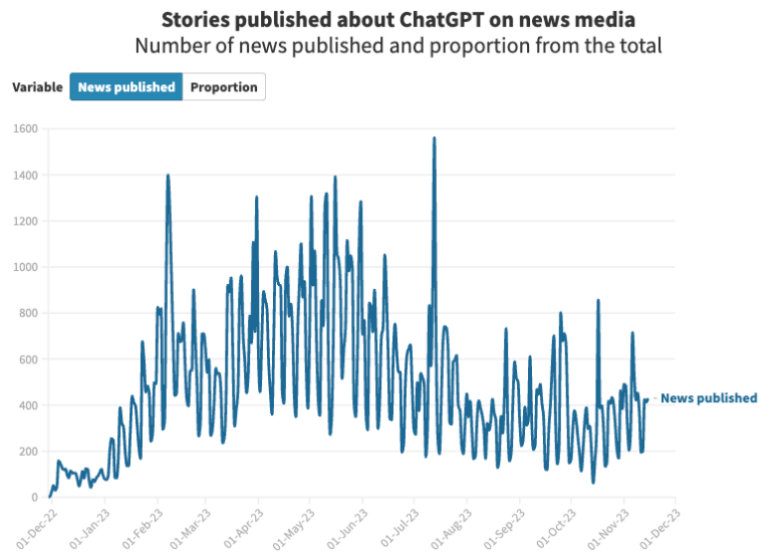
Table 2. Summary of the top 10 media with the highest news output on *ChatGPT* on a global scale between November 30, 2022, and November 27, 2023.

| <b>Source</b>                       | <b>Records</b> |
|-------------------------------------|----------------|
| <i>CE Noticias Financieras</i>      | 6,164          |
| <i>Business Insider</i>             | 1,350          |
| <i>AMB Crypto</i>                   | 516            |
| <i>Benzinga Newswires</i>           | 446            |
| <i>Dow Jones Institutional News</i> | 413            |
| <i>El Imparcial (online)</i>        | 317            |
| <i>The Times of India</i>           | 291            |
| <i>Semana</i>                       | 275            |
| <i>New York Times (online)</i>      | 266            |
| <i>PR Newswire</i>                  | 266            |

Source: Prepared by the authors based on the results obtained in Figure 9.

According to *MediaCloud*, the number of news items mentioning *ChatGPT* shows an interesting perspective on the media attention the tool has received. These data include the number of published news items mentioning *ChatGPT*, as well as their proportion to the total number of news items published on those dates, as can be seen in Figure 8.

Figure 8. Publications about ChatGPT in digital media, in different languages, between December 5, 2022, and November 18, 2023



Source: ChatGPT Impact Project (<https://chatgptimpact.com>).

Additionally, it can be indicated that the largest information flow on ChatGPT corresponds to the United States (3,016 news), followed far behind by India (533 news) and China (505 news), in which the names of OpenAI CEO Sam Altman (579 news), X CEO Elon Musk (522 news), and Sundar Pichai (Google) (70 news) stand out, according to complete records using the ProQuest tool, as shown in Figure 9.

Table 3. Summary of the top 10 people and countries most associated with ChatGPT in global media news output between November 30, 2022, and November 27, 2023

| Country              | Records | Person                             | Records |
|----------------------|---------|------------------------------------|---------|
| USA                  | 3,016   | Sam Altman (OpenAI)                | 579     |
| India                | 533     | Elon Musk (X, Space X, Tesla)      | 522     |
| China                | 505     | Sundar Pichai (Google)             | 70      |
| United Kingdom       | 219     | Joseph R Jr Biden (EEUU)           | 68      |
| Italy                | 202     | Bill Gates                         | 68      |
| Canada               | 104     | Satya Nadella (Microsoft)          | 59      |
| Spain                | 98      | Mark Zuckerberg (Meta)             | 45      |
| Mexico               | 91      | Donald Trump (EEUU)                | 42      |
| Brazil               | 81      | Kevin Roose (NYT)                  | 23      |
| United Arab Emirates | 81      | Warren Buffet (Berkshire Hathaway) | 22      |

Source: prepared by the authors based on the results obtained in Figure 9.



Source: own elaboration.

## 4. Discussion and conclusions

Since 2022, *ChatGPT* has been attracting considerable interest, particularly in the English-speaking world. This interest is driven both by public curiosity and the need for information professionals to collect comprehensive data on this rapidly evolving phenomenon.

This interest is reflected in media coverage, which intensifies at key moments in the development of *ChatGPT*, such as its launch, reaching 100 million users, and the introduction of *ChatGPT Plus* (see Figures 3 and 4). Cross-referencing with data such as that in Figure 5 (Wikipedia) reaffirms this global interest in the topic.

The extensive media coverage of *ChatGPT* establishes it as a benchmark in a context where public demand for information about its technology and scope is high. This is not only due to the time savings and improvements in professional routines provided by AI tools such as *ChatGPT* but also to the attention they devote to context. The work of the media impacts a better understanding of the subject.

One significant limitation of this study is the temporal restriction in data collection from *X* (formerly *Twitter*). Due to changes in the platform's API access policies in June 2023, we were unable to gather data for the full intended study period. This restriction affected the ability to provide a continuous analysis of *X*'s activity compared to platforms like Facebook and Instagram, where data was accessible throughout the entire timeframe. Consequently, the findings related to *X* are less comprehensive and may not fully reflect the platform's impact on the dissemination of information regarding *ChatGPT*. Future research should address this limitation by exploring alternative data sources or methodologies to monitor *X* and similar platforms under restrictive conditions. Additionally, cross-platform comparisons could benefit from the development of standardized approaches that mitigate data access disparities, ensuring more robust and consistent analyses across social media platforms.

The predominance of English with *ChatGPT* is noteworthy, given that it was initially launched in English, and its subsequent versions, as well as alternative and complementary resources, continue to operate primarily in English.

However, the coverage of *ChatGPT* about journalism or from the journalistic practice itself shows a large production of information and specific content.

Beyond the work of media and journalists, these results also suggest a rich and multifaceted discussion in the literature, addressing topics ranging from academic analysis to the practical application of these AI resources and tools in different journalistic contexts. This diverse landscape underscores the importance of exploring the multiple dimensions of *ChatGPT*'s impact in the media domain.

According to Apablaza-Campos and Codina (2023), *ChatGPT* has represented a turning point in terms of journalistic routines, but also in journalism research and teaching, since the focus has evolved from the automation of content to the generation of new content, with the corresponding misinformative drift that this can bring (and is bringing) therefore.

This type of generative resource has further empowered digital audiences, now with the ability to procure in very short periods, extensive and highly produced content adaptable to any platform or channel on the Internet. The social impact of *ChatGPT* has

been such that, for many people, the tool is synonymous with AI as a technique, which explains the enormous popularity of both terms in global searches.

There is an interest in media and journalists to dig more into the topic and produce corresponding information because there is also an increasing interest in it from audiences. Thus, the phenomenon seems to move to academia, specifically to the field of communication and journalism, which makes it necessary to influence the good uses and ethics of these resources and their results.

Perhaps this is the starting point for the next stage in the coverage, focused on analysis, argumentation, and ethical debate. Journalism is a mediator of changes in society and AI undoubtedly represents a disruptive element in the way we create and consume information, develop work, and process learning.

The impact of *ChatGPT* on journalism extends beyond the automation of processes and content generation, introducing profound transformations in the industry's professional, ethical, and social dynamics. While its capacity to efficiently produce text has optimized certain journalistic tasks, it also raises questions regarding the reliability of generated content and the associated risks of misinformation.

In this context, it is crucial to develop clear protocols that establish transparency standards, enabling audiences to identify when content has been generated or assisted by artificial intelligence. Furthermore, it is pertinent to explore the impact of these tools on media credibility, given that the indiscriminate use of generative technology could erode public trust.

These challenges not only require a rigorous ethical approach but also the adaptation of existing regulations to adequately regulate their application, considering their disruptive capacity in traditional informative practices.

Conversely, the predominance of English as the primary language of *ChatGPT* underscores the need for a more profound analysis of the linguistic and cultural inequalities that this technology may perpetuate. The limited availability of models adapted to other languages and cultural contexts not only restricts equitable access to these tools but also reduces diversity in the production of informative content.

This phenomenon is particularly relevant in regions with fewer technological resources, where the use of *ChatGPT* could potentially exacerbate both opportunities and pre-existing inequalities (Gonzalo, 2021; Gutiérrez-Provecho, *et al.*, 2021).

The development of generative artificial intelligence has had a double impact on the flow of information in the media. The interest and demand of audiences to know more about the subject and to keep up to date with the evolution of this technology, especially during the year 2023, led to a notable increase in the production of news and content on the subject by the media. Likewise, the particularities and operational potential of the tools developed have allowed the media to incorporate new protocols and codes of action in newsrooms and editorial groups in the same period and at the same speed, not to mention the associated needs in terms of staff training and literacy.

In short, journalism is at the forefront of the incorporation of technology, as well as a catalyst (especially international media with global projection) of the evolutionary process it is undergoing, with respect to the general public who are interested in making use of it in different spheres of life. That said, we are facing a new adjustment

in the digital paradigm shift that we have been experiencing rapidly as a global society for the last decade.

In a forward-looking manner, a comparative approach between developed and developing regions would allow for an evaluation of how the adoption of this technology affects global journalistic dynamics. Through the implementation of multilingual and culturally inclusive models, along with specific strategies to facilitate their use in marginalized contexts, it is possible to harness the transformative potential of ChatGPT while mitigating its polarizing effects on the media ecosystem.

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