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Corporate policies to protect against disinformation for young audiences: the case of TikTok

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Disinformation and fake news have become highly prevalent on social networks. As such, many platforms have tried to reduce audience exposure to false or erroneous data by implementing corporate policies to protect users. This is especially relevant in social networks aimed at young people, as is the case of TikTok. In recent years, such mediums have become more popular than news sites among young audiences. The purpose of this article is to analyze what these policies are, on what topics they are implemented and how they are being monitored and enforced by the social network TikTok during the period 2020–24. Nonetheless, it must also be mentioned that it is still too early to make a complete and comprehensive assessment of the effectiveness of these policies because many of them are not yet fully implemented.

KEYWORDS

audiences, disinformation, TikTok, fake news, corporate policies

1 Introduction

According to one of the first study on disinformation carried out in Spain (Salaverría-Aliaga and Sádaba-Chalezquer, 2022) disinformation is an issue that worries a large majority of Spaniards (95.8%). It threatens modern society and democracy and is therefore seen as a danger that concerns traditional media and social networks (López García et al., 2023). 72.1% of Spaniards have admitted to believing a message or video that turned out to be false (Salaverría-Aliaga and Sádaba-Chalezquer, 2022).

Social networks, in addition to modifying the way in which information flows and reaches citizens due to the massive irruption of multiple channels (Office of Science and Technology of the Congress of Deputies, 2023), have also become mediums through which large amounts of disinformation are diffused, therefore operating as vehicles of false information (Sidorenko-Bautista et al., 2021). Combating false news on these platforms has become a priority objective, especially since the emergence of the Covid-19 virus (García-Marín and Salvat-Martinrey, 2022) that exacerbated the problem of false information online (as an umbrella term for misinformation, fake news, disinformation, and rumors) (Zhu et al., 2022). During the pandemic, this type of information was circulating at peak levels (Colmenero-Ruiz et al., 2023).

This exceptional historical period exacerbated the dissemination of false news through social networks that spread rapidly, generating significant confusion and concern among citizens. For this reason, many national and European governments, as will be discussed later, took the decision to urgently develop policies to combat disinformation and to pass specific laws that would oblige the main social networks to adopt measures to protect users, taking into consideration the potential implications in regards to freedom of

expression (Zhu and Shengnan, 2023). Hence, the introduction of new legislation at the national and European level has compelled many platforms to try to reduce audience exposure to false or erroneous data by implementing corporate policies designed to protect users.

This occurrence is especially relevant in social networks aimed at the youth, as is the case of TikTok. In addition to its popularity among young people, it has become their reference point for news stories. This role was previously occupied by traditional media outlets, though they have lost much of their younger audiences, primarily as a result of the phenomenon known as "platformization" (Poell et al., 2019). New media have become the central actors for the production, distribution and monetization of cultural content. Consequently, that these age groups spend the most time using social networks seems to favor the growth of misinformation in a multichannel, multi-device and multi-platform media consumption environment (García-Avilés et al., 2023).

2 Materials and methods

This article falls within the qualitative typology of studies on disinformation in digital platforms initiated by Salaverría and Cardoso (2023), taking into account one of the difficulties that these authors put forward, that being access to the data of these platforms and their lack of transparency. Like the research conducted by Estrada-Cuzcano et al. (2020) this article was designed through a qualitative and interpretative approach and was framed in a descriptive documentary research, which determined the selection procedure, access and registration of the documentary sample.

For several reasons, the object of study is the social network TikTok. The first of these is the popularity of the network among Generation Z (16–24 years old). According to the digital consumption radiography of this generation (GFK, 2023), they use it much more than Facebook or Instagram. TikTok, launched in 2017, is the international version of the social network of Chinese origin based exclusively on airing dances and music, which had been inaugurated the previous year and is currently present in more than 150 markets. TikTok is one of the networks with the highest growth in number of users, this being the third consecutive year that its number of users has risen. It is also the network with the highest growth increasing its prompted and aided awareness, and its use (IAB, 2023) in Spain. It should be noted that it is the social network most valued by users and with a level of satisfaction above average (IAB, 2023). Spain is one of the countries in which the network is most widely used (Newman, 2022a); there are currently 18.3 million users nationally according to the latest available data (TikTok, 2023b).

The second reason is Generation Z's ever increasing reliance on social networks as the main sources of information. The information habits of this generation are in contrast to those of previous generations. Currently, 39% of 18–24 year olds consult networks as their main source of news. Therefore, these mediums have replaced news sites for young audiences (Newman, 2022b). Specifically, the utilization of TikTok for information has increased among 18–24 year olds in all markets, reaching 20% by 2023 (Newman, 2023). These youth are looking to these platforms for new information references and are establishing new information consumption patterns (Pérez-Escolar et al., 2023).

This research is of an exploratory nature and the research questions are: What is the legal framework regulating TikTok activity in Europe?; How does the consumption of content by younger audiences occur on the network? And through what tools, actions or agents is disinformation combated from the platform? The central objective is to analyze the corporate policies that TikTok has implemented (mainly at the European level), the issues they aim to deal with, and how the social network has monitored and complied with said policies from 2020 to 2024, given that TikTok "is becoming a new home for fake news stories, manipulated media, and other types of misinformation" (Newman, 2022a, 2022b, p.30). Unlike previous research that has focused primarily on analyzing the activity of verification agencies and fact-checkers (Ufarte Ruíz and Murcia Verdú, 2018; Alonso-López et al., 2021; Sidorenko-Bautista et al., 2021; Dafonte-Gómez et al., 2022; García-Marín and Salvat-Martinrey, 2022; Arrieta-Castillo and Rubio Jordán, 2023; Hidalgo Cobo and Puebla-Martínez, 2023) this study focuses on the platform's own corporate strategy.

To meet this objective, a systematic literature review was conducted. Prior studies on misinformation by other authors were consulted, such as those by Blanco-Alonso et al. (2021); Guallar et al. (2020); Salaverría et al. (2020); Gomes-Gonçalves et al. (2023), Hopp and Kazmi (2023); Rúas-Araújo and Panigua-Rojano (2023), and Salaverría and Cardoso (2023). Other fundamental sources of information consulted were the documents issued by the European Commission, the official journals of the European Union and the policy documents published by TikTok.

2.1 The new legal framework for TikTok's activity in Europe: the digital services act

On December 15, 2020, the European Commission presented the new European digital strategy consisting of two proposals: the Digital Markets Act (DMA) and the Digital Services Act (DSA). They were designed to create a safer and more reliable digital space for consumers. Although some EU member states do already apply a more coercive approach towards social media platforms within their jurisdiction (e.g., Germany with Network Enforcement Act) (Schlag, 2023), it was deemed necessary to develop an initiative common to all members. The Digital Services Act, applicable to all digital services that connect consumers to goods, services or content, came into force on November 16, 2022. It aims to establish a new regulatory framework for the protection of users, to ensure that their fundamental rights are respected and that there is greater protection of minors online. This law is enforced through the supervision of the European Commission, together with the national authorities appointed in each of the member states of the European Union. In Spain, it is the National Commission for Markets and Competition (CNMC) who will be responsible for being the independent regulator for the supervision of compliance with the law (CNMC, 2024) after being appointed by the Ministry for Digital Transformation and Public Function. To ensure compliance with the law, the European Center for Algorithmic Transparency (CETA) has also been created, responsible, among other functions, for analyzing transparency reports and risk assessments.

The Very Large Online Platforms (VLOP), which include TikTok, were those most affected by the application of this law as essential

moderators in the flow of disinformation (Office of Science and Technology of the Congress of Deputies, 2023). Therefore, they had to introduce relevant changes in their design and procedures, acquiring new responsibilities and obligations such as "limiting the dissemination of illegal content and products online, increasing the protection of minors and offering users more choice and better information" (European Commission, 2022b), in addition to paying more attention to the dissemination and amplification of incorrect or misleading content.

Since 17 February 2024, the Digital Services Act applies to all online intermediaries in the EU. However, it first was being applied to designated platforms with more than 45 million users in the EU (10% $\,$ of the EU population) from the end of August 2023. TikTok was designated as a Very Large Online Platform (VLOP) on 25 April 2023, along with 16 other platforms and two search engines¹ under the EU's Digital Services Act after the company declared that it had 135.9 million monthly active users in the EU². It should be remembered that for EU users, TikTok services are provided by TikTok Technology Limited, a company registered in the Republic of Ireland. As a VLOP, four months on from its designation, TikTok had to start complying with a series of obligations set out in the DSA (Official Journal of the European Union, 2022), one of those being linked to information transparency. VLOPs and very large online search engines are obligated to publish clear and easily understandable reports on any content moderation activity they have carried out, as well as to assess the risks that their services may pose to the companies with which they operate. In addition, among the commitments they had to fulfill, two stand out as being clearly linked to the objectives of this investigation: on the one hand, to improve the protection of minors by redesigning their systems to ensure their safety; and on the other hand, to carry out more diligent content moderation to minimize the spread of disinformation. In addition, the VLOPs had 4 months to deliver the first risk assessment to the Commission. This document was primarily focused on the following: illegal content; fundamental rights, such as freedom of expression, media freedom and pluralism, discrimination, consumer protection and children's rights; public security and electoral processes and gender-based violence, public health, protection of minors, and mental and physical wellbeing (European Commission, 2024b).

Alongside this, following the entry into force of the Digital Markets Act (DMA), the European Commission in September 2023 designated ByteDance as "gatekeeper" for having a strong and established economic position in the market and a solid intermediary position by providing a gateway between businesses and consumers in relation to the platform's core services (European Commission, 2022c). As clarified by the platform itself, though the European Commission officially designated ByteDance Ltd. as the guardian, this decision was

based solely on the activity of the TikTok service. This decision was appealed (and dismissed, for the time being) on the grounds that this determination undermined the objective of the DMA (TikTok, 2023b) to protect actual gatekeepers from newer competitors such as TikTok.

2.2 Content consumption by the platform's younger users

One of the defining features of content consumption on TikTok, as pointed out by Martínez-Fresneda and Zazo-Correa (2024), is the content viewing formula that favors rapid viralization, together with its recommendation system. One of the most representative features of this network is the FYF (ForYouFeed) where personalized content is offered and suggested for each user based on the algorithms drawing from the user's browsing history. Although the algorithm is confidential, the platform does indicate that the recommendation system is based on factors such as the user's interests and interactions (the videos you like or share, the accounts you follow, the comments you post, and the content you create), the device and account settings, language preference, country setting, and device type (TikTok, 2020).

Added to this are some of the communicative features of the network related to the possibilities of creating greater interest in audiences through "consumption experiences that take into account the concrete (content, information, etc.) and the abstract (personal storytelling, emotionality, etc.)" (Peña-Fernández et al., 2022). In addition, its artificial intelligence (AI) algorithm, based on user behaviors and interests, is especially designed to be addictive (Pedrouzo and Krynski, 2023). This can greatly influence the consumption pattern of younger users, often leading them to feel "stuck in a rabbit hole," sequentially viewing countless videos or images on the same topic (Woolley and Sharif, 2021). This phenomenon is understood as "as a collapse of mainstream recommendations, in favor of ultrapersonalized ones that lock users into narrow and specialized feeds" (Le Merrer et al., 2023). Yes, TikTok aims to control the existing information flows on the platform. Nevertheless, there is a significant flow of content that encourages disinformation: sometimes this occurs unintentionally, though oftentimes it does so intentionally (Alonso-López et al., 2021).

In relation to the age required to participate, it should be noted that TikTok is available for those over 13 years of age. Nonetheless, the platform adopts measures that restrict access to certain functions of the product, such as excluding from the "FYF" any content created by users under 16 years of age. As previously mentioned, the platform's own consumption dynamics can generate behavioral addictions as well as result in exposure to inappropriate content for these audiences. TikTok's website states its commitment to ensuring that young people have a safe experience, outlining all prohibited (consumption of alcohol, tobacco and drugs by young people, physical abuse, etc.) and age-restricted content (significant body exposure of adults, content on cosmetic surgery that does not include risk warnings, etc.). However, nowhere is there specific mention of any specific policy linked to combating the spread of misinformation within these vulnerable audiences.

3 Results

One of TikTok's obligations after entry into the DSA is to combat disinformation. For this reason, a series of rules (Community Guidelines)

¹ Alibaba AliExpress, Amazon Store, Apple AppStore, Booking.com, Facebook, Google Play, Google Maps, Google Shopping, Instagram, LinkedIn, Pinterest, Snapchat, TikTok, Twitter, Wikipedia, YouTube, Zalando, Bing y Google Search.
2 In accordance with the obligations under the Digital Services Act (Article 24(2)), TikTok Technology Limited reports that it had on average 142 million 'monthly active recipients' in the European Union member state countries between August 2023 and January 2024 (https://www.tiktok.com/transparency/en/eu-mau-2024-2/).

are defined that must be followed by users and content published on the platform. These are updated frequently, the last update being in March 2023. Specifically, the platform's policies prohibit certain types of misinformation: that which poses a risk to public safety or may induce panic regarding a crisis event or emergency; that related to medical misinformation, such as misleading statements about vaccines, inaccurate medical advice and other misinformation that poses a risk to public health; climate change misinformation such as denying the existence of climate change or the factors that contribute to it; material that has been edited, spliced, or combined (such as video and audio) in a way that may mislead a person about real-world events, and election misinformation (Transparency Center, 2023). In the case of Spain, 20,493 videos (107,118,504 views) were removed that were deemed to have violated the harmful misinformation policy (Transparency Center, 2023).

In order to prevent the propagation and dissemination of this content on the platform, different corporate policies were adopted, which will be grouped into the following three thematic areas according to one of the research questions about which tools, actions or agents are used to combat disinformation.

3.1 Policies for institutional collaboration

Combating disinformation has been one of the main objectives (and challenges) of the European Union since 2015 (European Court of Auditors, 2021). As part of the Action Plan Against Disinformation in 2018, the Code of Practice on Disinformation was approved by online platforms, major technology companies and key figures in the advertising industry. This voluntary code contained a set of commitments designed to combat disinformation. It defined "disinformation" as "verifiably false or misleading information" that, cumulatively, (a) "is created, presented and disseminated for profit or to deliberately mislead the public" and (b) "may cause public harm," understood as "threats against democratic, political and policy-making processes, as well as against public goods, such as the protection of health, the environment or the security of EU citizens" (European Commission, 2018). Misleading advertising, satire and parody, misinformation or clearly partisan comments fall outside of what can be considered as disinformation (European Commission, 2018). Under this definition, some authors, such as Strowel and De Meyere (2023), argue that three conditions must be met for a circulating piece of content to be considered disinformation: the truth condition (the information must be inaccurate); the intentionality condition (there must be evidence of intent to make economic or political gains based on the diffusion of the information); and the public harm condition (there must be a potential for the information to cause *public harm*).

Companies such as Google, Facebook, Twitter, Microsoft (May 2020) and TikTok (June 2020), together with advertising industry players and verifiers, signed up to the commitments as expressed in the code in order to self-regulate the fight against disinformation.

Two years later, the European Commission published an evaluation report on compliance with the code in which certain important deficiencies were detected, something that should be corrected. Guidelines were proposed on how to solve these issues within the framework of the Action Plan for European Democracy. It was believed that the code should be strengthened in certain areas: for example, regarding the stricter demonetization of disinformation, improving user training or increasing data verification coverage in addition to

creating a more robust monitoring framework (European Commission, 2021). Therefore, a new version of the code (Strengthened Code of Practice on Disinformation) was published in 2022 with 44 commitments and 128 specific measures in these areas: demonetization; reducing financial incentives for disinformation providers; transparency of political advertising; ensuring the integrity of services; empowering users and researchers and the fact-checking community; a transparency center and working group; and strengthening the monitoring framework (European Commission, 2022a).

However, TikTok does not subscribe to 18 of the 44 commitments set out in the code. In some cases, this is because certain codes are not intended for platforms like TikTok (for example measures 12.1, 12.2 and 12.3 are applicable to Civil Society only). Nonetheless, it is striking that the platform did not subscribe to the following:

- a. Commitment 20: "empower users with tools to assess the provenance and edit history or authenticity or accuracy of digital content." The justification for not accepting this commitment was that TikTok believes that it would be imprudent to commit to this measure at a time when the underlying technology is still unproven, and the standards to be met have not yet been finalized.
- b. Commitment 22 (measure 22.1 and 22.2): "provide users with tools to help them make more informed decisions when they encounter online information that may be false or misleading, and to facilitate user access to tools and information to assess the trustworthiness of information sources, such as indicators of trustworthiness for informed online navigation, particularly relating to societal issues or debates of general interest." TikTok does not see the need to accept this, arguing that this commitment already appears in the code. Though arguing that this point is unnecessary in the current context, the organization does not rule out a change of stance in the future, if necessary.

3.2 Transparency policies in content moderation

Content moderation describes mechanisms that are designed to prevent the dissemination of illegal and undesirable content in online communities. There exists a range of possible measures to prevent harm, including content removal, visibility reduction (demotion), labelling, and account suspensions/terminations (Drolsbach and Pröllochs, 2024). After the introduction of the DSA, VLOPs such as TikTok are expected to adapt their content moderation processes and even increase the resources dedicated to these processes for detecting illegal content. These platforms are obligated to inform their users about their moderation decisions, indicating the reasons and the reference in regards to the specific legal provision infringed: the so-called statements of reasons (SoRs). When platforms submit SoRs, they must assign them to one of 14 proposed categories (Scope of platform service; Pornography or sexualized content; Illegal or harmful speech; Scams and/or fraud; Violence; Unsafe and/or illegal products; Intellectual property infringements; Protection of minors; Data protection and privacy violations; Self-harm; Non-consensual behavior; Negative effects on civic discourse or elections; Risk for public security and Animal welfare). All SoRs are collected and

published in the DSA Transparency Database, a public database managed by the commission. This is overseen by the DSA who can "track the content moderation decisions taken by providers of online platforms in almost real-time" (European Commission, 2024c).

It is worth noting that between September and November 2023, in the first 2 months after the introduction of the DSA Transparency Database in the EU, the largest number of SoRs (#SoR) was submitted by TikTok. It was the most active platform in terms of content moderation, carrying out content moderation decisions per MAU (monthly active users) at a rate that was more than 350 times that of X/Twitter (Drolsbach and Pröllochs, 2024).

As set out in article 17 of the DSA, these platforms must provide clear, specific and useful information on any decision taken in relation to the restriction of visibility, or the suspension or cessation of the provision of services. Platforms must also indicate the type of restriction that has been implemented, with the main measure being the disabling access to content (14,181,015,846), followed by the removal of content (532,379,151). At the present time 15,065,137,838 SoRs were submitted. The most reported violations were the following: the scope of platform service, illegal or harmful speech and pornography or sexualized content. In the case of TikTok, the platform sent 494,756,708 restrictions. The most common offense was in regards to "scope of platform service" (43.75%) followed by "illegal or harmful speech" (42.02%) (European Commission, 2024c).

Platforms are also supposed to indicate whether such decisions were detected or identified (Automated Decision), and whether the decision regarding content that has been detected or identified was taken using automated means (Automated Detection). 70% were automatic decisions (European Commission, 2024c).

For TikTok specifically, the content moderation approach is based on four pillars: (1) the removal of content for non-compliance with the rules; (2) the age restriction of content for mature audiences (only those aged 18 or older can access it); (3) the maintenance of the "For You Feed" eligibility standards; (4) the empowerment of the community with information, tools and resources (TikTok, 2023c). This content moderation is carried out through machine learning algorithms and human moderation. The content uploaded to the platform is first reviewed by automated moderation technology through which any content that may violate any of the platform policies is identified. The system analyzes keywords, images, titles and audio in order to detect any violation. If a violation is indeed evident, it will be eliminated. If not, it will be sent to the human moderation teams. Currently, 6,125 people moderate content, covering at least one official language for each of the 27 European Union Member States. 468 of these people operate in Spain (TikTok, 2023a) so that they know not only the language but also the socio-cultural context of the country. In the case of the Spanish language, 8.4% of the total number of moderators (TikTok, 2024) are assigned to review content flagged by technology as well as popular content.

In the event that content is not caught by the moderation processes, users can report it for non-compliance with the Community Guidelines (flagging). TikTok also employs another content moderation technique called "shadow banning," which is "hiding users from the apps' main feeds without their knowledge." This practice *de-facto* limits their visibility and reach so that, from the user's perspective, the platform appears to be working as usual, despite the fact that their content is much less visible to other users than usual (Are and Briggs, 2023; Kosters and Gstrein, 2023).

It is worth noting that TikTok created an additional reporting channel for the European community to 'Report Illegal Content,' through which users can report content they consider illegal and justify their decision. The same applies to the governments of EU countries, which can report the presence of illegal content in the following categories: Child sexual exploitation, terrorist offences/content, illegal hate speech, content relating to violent or organized crime, illegal privacy-related violations; the non-consensual sharing of private or intimate images; illegal goods/services; harassment or threats; defamation; consumer-related offences; information related offences/contempt of court; financial crime; national security-related offences, and other illegal content (TikTok, 2023a).

From September 1st to 30th 2023, the period covered by the first DSA Transparency Center (2023), 17 orders were received from government authorities in the European Union requesting the removal of content, none of which were submitted by the Spanish government. France was the country that sent the most orders (13). However, government action with respect to the request for information was much more active, with 52 orders from government authorities in the European Union related to user information disclosure. The government with a total of 265 requests. These numbers are somewhat unsurprising given the number of users of the platforms in each of these countries, since France (21.4 million) and Germany (20.9 million) have the highest number of users in the European Union.

3.3 Policies for collaboration with fact-checkers

TikTok partners with fact-checking organizations to identify and flag misleading content. As part of TikTok's Global Fact-checking Program, they collaborate with the following 18 organizations: Agence France-Presse (AFP), Animal Político, Australian Associated Press (AAP), Code for Africa, dpa Deutsche Presse-Agentur, Demagog, Estadão Verifica, Facta, Lead Stories, Logically Facts, Newschecker, Newtral, Poligrafo, PolitiFact, Reuters, Science Feedback, and Teyit. These all belong to the International Fact-Checking Network (IFCN) who assess the accuracy of content without acting as moderators. Rather, they evaluate the information so that the moderator team can then take the appropriate action.

As soon as misinformation is detected, the moderators consult a global database to confirm that it is indeed misinformation. Once the fact-checkers confirm that the content is harmful misinformation, the moderators will remove the content or restrict its reach. In the event that the content cannot be verified, it will be labeled as unverified and will not be available in the FYF, thus reducing its reach.

The activity that verification agencies or fact-checkers present on the platform exercise when verifying or denying content from their profiles, which in 2021 was still very incipient and limited, should also be taken into account (Sidorenko-Bautista et al., 2021).

4 Conclusion

It is undeniable that the arrival of the DSA has meant progress in European policies against online disinformation, due to the systematization and application of measures aimed at the major

platforms. These companies now must justify their actions with a view to collaborating in the fight against disinformation. The co-responsibility of the platforms is necessary to ensure a safe browsing experience for users and in particular for young audiences. Therefore, platforms such as TikTok have initiated the development of new corporate policies that comply with the obligations imposed by this law. However, it must also be acknowledged that it is difficult to legislate online spaces where public and private matters are debated without undermining citizens' right to free speech.

It is still too early to make a complete and exhaustive assessment of the effectiveness of such policies as many of them have not yet been fully implemented. The analysis conducted here shows that so far little has been done in the fight against disinformation among young audiences, the main users of the platform. Some measures have been developed to protect minors, though they do not specifically target young audiences. Of course, the protection of online minors on this platform should be a priority, guaranteeing their security and privacy. Not doing so can have disastrous consequences. Though TikTok has developed training actions aimed at these age groups, this and other platforms, as well as national and European institutions, must provide young users with resources to increase their critical and analytical capacity in these new online environments. Education and media literacy are crucial components in the fight against disinformation (Salaverría and Cardoso, 2023) and play a central role in citizen empowerment against fake news (Tejedor Calvo et al., 2021), especially for the young. This fake news, presented as real, may mislead readers who could end up making decisions based on erroneous information. According to a recent Ipsos Report (2023), the average citizen's ability to distinguish real news from fake news is uneven across countries, being quite low in some (in Spain, for example, only 33%). Therefore, beyond the corporate policies implemented by digital platforms, additional actions aimed at users at the country level may also be necessary.

In addition, TikTok must contend with the fact that some governments, such as Great Britain and many others, have decided to ban the app on civil servants' work phones. European institutions, such as the European Parliament, have done the same, due to cybersecurity concerns.

In addition, the first meeting of the European Digital Services Board with the digital services coordinators opened formal proceedings against TikTok under the Digital Services Act in order to assess whether the network had infringed the regulations (Articles 34(1), 34(2), 35(1), 28(1), 39(1) and 40 (12)) in areas linked to the protection of minors, advertising transparency, and data access for researchers, as well as the risk management of addictive design and harmful content (European Commission, 2024a). In these procedures, emphasis is placed on the fact that the design of the TikTok system may lead to behavioral addictions and/or create so-called "rabbit hole effects." The usefulness and effectiveness of the tools used by the

platform for age verification has also been questioned. Such actions seriously call into question the platform's compliance with its obligations to one of the most vulnerable user groups.

In short, more (and better) monitoring and evaluation of the policies developed by the platforms is needed to mitigate the potentially serious risks associated with activity on these platforms, as well as coercive fines such as those outlined in the DSA.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

NQ-F: Writing – original draft, Writing – review & editing. AG-N: Writing – original draft, Writing – review & editing. CF-S: Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

Alonso-López, N., Sidorenko-Bautista, P., and Giacomelli, F. (2021). Beyond challenges and viral dance moves: TikTok as a vehicle for disinformation and fact-checking in Spain, Portugal, Brazil, and the USA. *Anàlisi: Quaderns de Comunicació i Cultura* 64, 65–84. doi: 10.5565/rev/analisi.3411

Are, C., and Briggs, P. (2023). The emotional and financial impact of De-platforming on creators at the margins social media and society. *Soc. Media+ Soc.* 9, 1–12. doi: 10.1177/205630512311551

Arrieta-Castillo, C., and Rubio Jordán, A. V. (2023). Periodismo de verificación en formato vertical: narrativas multimedia de los verificadores en TikTok. Ámbitos: Rev. Int. Comun. 60, 13–32. doi: 10.12795/Ambitos.2023.i60.01

Blanco-Alonso, A., Chaparro-Domínguez, M. A., and Repiso-Caballero, R. (2021). El fact-checking como estrategia global para contener la desinformación. *Estudios del mensaje periodístico* 26, 779–791.

CNMC. (2024). El Ministerio para la Transformación Digital y de la Función Pública designa a la CNMC como Coordinador de Servicios Digitales de España. Available at: https://www.cnmc.es/prensa/coordinador-servicios-digitales-20240124

Colmenero-Ruiz, M. J., Paletta, F. C., and Gonzales-Aguilar, A. (2023). Interactive mapping of Covid-19 disinformation in Ibero-America. *Profesional de la información* 32:13. doi: 10.3145/epi.2023.sep.13

Dafonte-Gómez, A., Míguez-González, M.-I., and Ramahí-García, D. (2022). Fact-checkers on social networks: analysis of their presence and content distribution channels. *Commun. Soc.* 35, 73–89. doi: 10.15581/003.35.3.73-89

Drolsbach, C., and Pröllochs, N. (2024). Content Moderation on Social Media in the EU: Insights From the DSA Transparency Database. In Companion Proceedings of the ACM Web Conference 2024 (WWW'24 Companion), Singapore. ACM, New York, NY, USA. 13–17.

Estrada-Cuzcano, A., Alfaro-Mendives, K., and Saavedra-Vásquez, V. (2020). Disinformation y misinformation, Posverdad y fake news: precisiones conceptuales, diferencias, similitudes y yuxtaposiciones. *Información, Cultura y Sociedad* 42, 93–106. doi: 10.34096/ics.i42.7427

European Commission (2018). 2018 Code of Practice on Disinformation. Available at: https://digital-strategy.ec.europa.eu/en/library/2018-code-practice-disinformation

European Commission (2022a). Strengthened Code of Practice on Disinformation. Available at: https://digital-strategy.ec.europa.eu/en/library/guidance-strengthening-code-practice-disinformation

European Commission (2022b). Ley de Servicios Digitales: entran en vigor las normas determinantes de la UE para las plataformas en línea. Available at: https://ec.europa.eu/commission/presscorner/detail/es/IP_22_6906

European Commission (2022c). Ley de Mercados Digitales: garantizar unos mercados digitales justos y abiertos. Available at: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_es

European Commission (2024a). Commission opens formal proceedings against TikTok under the Digital Services Act. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_926

European Commission (2024b). DSA: Very large online platforms and search engines. Available at: https://digital-strategy.ec.europa.eu/en/policies/dsa-vlops

European Commission (2024c). DSA Transparency Database. Available at: $\frac{1}{100} \frac{1}{100} = \frac{1}{100} = \frac{1}{100} \frac{1}{100} = \frac{1}{100$

European Court of Auditors. (2021). El impacto de la desinformación en la UE: una cuestión abordada, pero no atajada. Available at: https://www.eca.europa.eu/es/publications/did=58682

García-Avilés, J. A., Arias, F., De Lara, A., Paisana, M., Carvajal, M., Foá, C.. (2023). IBERIFIER: Análisis de las tendencias e innovaciones en el ecosistema mediático de España y Portugal (2025-2030). Avaliable at: https://iberifier.eu/app/uploads/2024/01/ IBERIFIER-Report-Analisis-de-las-tendencias-e-innovaciones-en-el-ecosistema-mediatico-de-Espana-y-Portugal-2025-2030.pdf

García-Marín, D., and Salvat-Martinrey, G. (2022). Viralizar la verdad. Factores predictivos del engagement en el contenido verificado en TikTok. *EPI* 31:10. doi: 10.3145/epi.2022.mar.10

GFK. (2023). Available at: https://www.gfk.com/es/informacion/infografia-genz-gfkdam (Accessed March 17, 2024).

Gomes-Gonçalves, S., Vázquez-González, J., and González-Sánchez, P. (2023). Estrategias para luchar contra la desinformación en la comunicación corporativa. Redmarka. Revista de Marketing Aplicado 27, 111–133. doi: 10.17979/redma.2023.27.1.9534

Guallar, J., Codina, L., Freixa, P., and Pérez-Montoro, M. (2020). Desinformación, bulos, curación y verificación. Revisión de estudios en iberoamérica 2017-2020. Telos: revista de Estudios Interdisciplinarios en Ciencias Sociales 22, 595–613. doi: 10.36390/

Hidalgo Cobo, P., and Puebla-Martínez, B. (2023). Metodología para el análisis de contenido de agencias de verificación en TikTok. *Comunicación Métodos* 5, 47–65. doi: 10.35951/v5i2.199

Hopp, T., and Kazmi, S. (2023). Assessing the potential conditioning effects of mis and disinformation self-efficacy on the relationship between general social media use and political knowledge. *Front. Psychol.* 14:1226861. doi: 10.3389/fpsyg.2023.1226861

IAB (2023). El Estudio anual Redes Sociales 2023. Available at: https://iabspain.es/sin-acceso/download-id/240924/?gf_protect_submission=1 (Accessed March 1, 2024).

Ipsos Report (2023). Global Views on A.I. and Disinformation. Available at: https://www.ipsos.com/sites/default/files/ct/news/documents/202311/Ipsos_Global_Views_on_AI_and_Disinformation_full_report.pdf (Accessed May 1, 2024).

Kosters, L., and Gstrein, O. J. (2023). TikTok and transparency obligations in the forthcoming EU digital services act (DSA) – a scoping review. Zeitschrift für Europarechtliche Studien (ZEuS) 27, 110–145. doi: 10.2139/ssrn.4652543

Le Merrer, E., Tredan, G., and Yesilkanat, A. (2023). Modeling rabbit-holes on YouTube. Soc. Netw. Anal. Min. 13:100. doi: 10.1007/s13278-023-01105-9

López García, X., Silva Rodríguez, A., Sixto García, J., Toural Bran, C., Vázquez Herrero, J., Cardoso, G., et al. (2023). *Iberifier: Fact-checking trends in Spain and Portugal*. doi: 10.15581/026.008

Martínez-Fresneda, H., and Zazo-Correa, L. (2024). Estudio de los perfiles en TikTok de El Mundo, El País, ac2alityespanol y La Wikly para analizar las oportunidades informativas de esta red social para la audiencia joven. *Rev. Lat. Comun. Soc.* 82, 1–13. doi: 10.4185/rlcs-2024-2180

Newman, N. (2022a). How publishers are learning to create and distribute news on TikTok: Reuters Institute. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-12/Newman_How_Publishers_are_Learning_to_Create_and%20 Distribute_News_on_TikTok.pdf

Newman, N. (2022b). Reuters institute digital news report 2022. Reuters Institute Available at: https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2022

Office of Science and Technology of the Congress of Deputies. (2023). *Informe C: Desinformación en la era* digital. doi: 10.57952/j3p6-9086

Official Journal of the European Union (2022). Reglamento (UE) 2022/1925 del Parlamento Europeo y del Consejo, de 14 de septiembre de 2022, sobre mercados disputables y equitativos en el sector digital y por el que se modifican las Directivas (UE) 2019/1937 y (UE) 2020/1828 (Reglamento de Mercados Digitales), 265. Available at: https://www.boe.es/buscar/doc.php?id=DOUE-L-2022-81470

Pedrouzo, S. B., and Krynski, L. (2023). Hyperconnected: children and adolescents on social media. The TikTokphenomenon. *Arch. Argent. Pediatr.* 121:e202202674. doi: 10.5546/aap.2022-02674.eng

Peña-Fernández, S., Larrondo-Ureta, A., and Morales-i-Gras, J. (2022). Current affairs on TikTok. Virality and entertainment for digital natives. *Profesional de la información* 31:6. doi: 10.3145/epi.2022.ene.06

Pérez-Escolar, M., Alcaide-Pulido, P., and Del Toro, A. (2023). Nuevos referentes informativos de la generación Z. Estudio del rol de los y las influencers en TikTok como divulgadores/as de contenidos. *Rev. Prisma Soc.* 40, 262–288. Available at: https://revistaprismasocial.es/article/view/4863

Poell, T., Nieborg, D., and Van Dijck, J. (2019). Concepts of the digital society: platformisation. *Internet Policy Rev.* 8:1425. doi: 10.14763/2019.4.1425

Rúas-Araújo, J., and Paniagua-Rojano, F.-J.. (2023). Aproximación al mapa sobre la investigación en desinformación y verificación en España: estado de la cuestión. ICONO 14. Revista Científica De Comunicación Y Tecnologías Emergentes 21. doi: 10.7195/ri14.v21i1.1987

Salaverría-Aliaga, R., and Sádaba-Chalezquer, C. (2022). DADUN: I Estudio sobre la desinformación en España: Depósito Académico Digital Universidad de Navarra Available at: https://dadun.unav.edu/handle/10171/63643.

Salaverría, R., Buslón, N., López-Pan, F., León, B., López-Goñi, I., and Erviti, M.-C. (2020). Desinformación en tiempos de pandemia: tipología de los bulos sobre la Covid-19. *El profesional de la información*, 29, e290315. doi: 10.3145/epi.2020.may.15

Salaverría, R., and Cardoso, G. (2023). Future of disinformation studies: emerging research fields. *Profesional De La información* 32:25. doi: 10.3145/epi.2023.sep.25

Schlag, G. (2023). European Union's regulating of social media: a discourse analysis of the digital services act. *Politics Governance* 11, 168–177. doi: 10.17645/pag.v11i3.6735

Sidorenko-Bautista, P., Alonso-López, N., and Giacomelli, F. (2021). Espacios de verificación en TikTok. Comunicación y formas narrativas para combatir la desinformación. *Rev. Lat. Comun. Soc.* 79, 87–113. doi: 10.4185/RLCS-2021-1522

Strowel, A., and De Meyere, J. (2023). The digital services act: transparency as an efficient tool to curb the spread of disinformation on online platforms? JIPITEC. Available at: https://www.jipitec.eu/archive/issues/jipitec-14-1-2023/5708/

Tejedor Calvo, S., Portalés-Oliva, M., Carniel Bugs, R., and Cervi, L. (2021). Journalism students and information consumption in the era of fake news. *Media Commun.* 9, 338–350. doi: 10.17645/mac.v9i1.3516

TikTok. (2020). How TikTok recommends videos #ForYou. Available at: https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you

TikTok. (2023a). TikTok's DSA Transparency Report. Available at: https://www.tiktok.com/transparency/en/dsa-transparency/

TikTok. (2023b). Recurrimos la designación que hemos recibido como 'guardián de acceso' según la Ley de Mercados Digitales. Available at: https://newsroom.tiktok.com/es-es/tiktok-apela-la-designacion-como-guardian-de-acceso-ley-de-mercados-digitales

TikTok. (2023c) Normas de la comunidad. Available at: https://www.tiktok.com/community-guidelines/es-latam/overview/

TikTok. (2024). Informe de cumplimiento de las Normas de la comunidad. Available at: https://www.tiktok.com/transparency/es-es/community-guidelines-enforcement-2023-3/

Transparency Center. (2023). Code of Practice on Disinformation – Report of TikTok for the period 1 January 2023–30 June 2023. Available at: https://disinfocode.eu/reports-archive/?years=2024

Ufarte Ruíz, M. J., and Murcia Verdú, F. J. (2018). El fact checking: en busca de un nuevo modelo de negocio sostenible para el periodismo. Estudio de caso de Miniver. Miguel Hernández Commun. J. 9, 511–534. doi: 10.21134/mhcj. v0i9.267

Woolley, K., and Sharif, M. A. (2021). Down a rabbit hole: how prior media consumption shapes subsequent media consumption. *J. Mark. Res.* 59, 453–471. doi: 10.1177/00222437211055403

Zhu, X., and Shengnan, Y. (2023). "Toward a Sociotechnical Framework for Misinformation Policy Analysis" in *The Usage and Impact of ICTs during the Covid-19 Pandemic*, ed. Shengnan Yang, Xiaohua Zhu and Pnina Fichman (Routledge: New York), 11–45.

Zhu, X., Yang, S., and Allen, S. (2022). A comparison of false-information policies in five countries before and during the COVID-19 pandemic. Proceedings of the 55th Hawaii International Conference on System Sciences. Available at: http://hdl.handle.net/10125/79660