

Disinformation on the Ukraine war: an analysis of fact-checking agencies in Spain and their presence on TikTok

Desinformación en la guerra de la ucrania: análisis de las agencias de verificación españolas en TikTok



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Abstract:

This research addresses the verification and debunking related to the war in Ukraine carried out by Spanish fact-checking agencies on TikTok. The agencies include EFE Verifica, Maldita, Newtral, and Verificat, all of which are affiliated with the International Fact-Checking Network. The aim is to analyse the features, purposes, and approaches used in debunking false information, and to identify similarities among the four agencies. The study has used statistical quantitative research methods that are exploratory, descriptive, and inferential in nature, based on content analysis. A total of 652 posts were reviewed, which were published on TikTok by the four agencies between February 2022 and March 2023, from which 91 verifications related to the war in Ukraine were revealed. The findings confirm prior research indicating a prevalence of fake news related to false contexts, video formats, and military attacks, which are the most common themes. What is striking is that the fact-checkers use more dynamic resources in order to adapt their work to the style of TikTok, with a predominant focus on debunking false information (e.g. public health), rather than giving long, drawn-out explanations. Finally, similarities have been identified among the agencies regarding the types of disinformation verified, as well as common themes and formats.

Keywords:

Debunking; Ukraine war; TikTok; fact-checkers; disinformation.

Resumen:

La presente investigación aborda las verificaciones y desmentidos sobre la guerra de Ucrania que realizan en TikTok las agencias españolas de la International Fact-Checking Network: EFE Verifica, Maldita, Newtral y Verificat. Los objetivos son analizar las características, la finalidad y el enfoque de la desinformación verificada, así como las similitudes entre las cuatro agencias. El diseño metodológico consiste en una investigación exploratoria, descriptiva e inferencial basada en el análisis de contenido en base a la codificación de variables y el tratamiento estadístico cuantitativo de los resultados obtenidos. Se han revisado 652 posts publicados en TikTok por las cuatro agencias desde el febrero de 2022 hasta marzo de 2023, con un total de 91 verificaciones realizadas sobre la guerra de Ucrania. Los resultados confirman las investigaciones previas sobre el predominio del falso contexto, del formato audiovisual y de los ataques militares como temática más frecuente. Las agencias utilizan recursos más dinámicos para adaptarse a la red social TikTok, con un enfoque que prioriza desmentir informaciones falsas (salud pública) frente a ofrecer explicaciones en profundidad (razón pública). Por último, se han identificado similitudes en las agencias en cuanto al tipo de desinformación verificada, las temáticas y el formato.

Palabras clave:

Fact-checking; guerra de Ucrania; TikTok; agencias de verificación; desinformación.

1. Introduction

The relevance of the object of study is justified by the undeniable graveness of a large-scale war on European soil, given the humanitarian, economic, military, and geopolitical consequences (Feás and Steinberg, 2022). Other risks include the involvement of prominent international actors (Demurtas and González, 2023) and the escalation of tension to the point where some European countries have suggested sending troops to Ukraine, with Russia countering with threats of a potential nuclear war (Cuesta, February 29, 2024).

The choice of the social network TikTok for this study, as well as fact-checking agencies and the Russia-Ukraine conflict, offers a paradigmatic context for examining the communicative and informative aspects of international military conflict, as social networks and disinformation have played a key role in the Ukraine war. Moreover, TikTok has emerged as the fastest-growing social network in recent years (Qustodio, 2023) and, in the context of the war, TikTok has served as both a channel for disseminating fake news and for combating it, which highlights the crucial importance of having fact-checking agencies present on TikTok.

The Ukraine war has been called the first social media war (Fetoshi and Gërguri, 2023), due to the key role played by User-Generated Content (UGC) (Magallón-Rosa et al., 2023), and photojournalism (Castrillo and Vera, 2023). Social networks have been used not only as a vehicle for disinformation and state propaganda (Arteaga, 2023), but also by numerous actors, including civilians, battlefield combatants, influencers, and journalists. It has even been used as a personal communication tool for enhancing the public profile of prominent figures such as Volodymyr Zelensky and Yevgeny Prigozhin (Nastasia and George, 2023). The use of cameras on military drones and helmet-mounted cameras has generated a huge amount of audio-visual content regarding the conflict, reinforcing the live, first-hand broadcast of the war, which has added relevant nuances to the concept of hyper-reality addressed by Baudrillard with regard to the Gulf War in 1990 (Baudrillard and Kauf, 1991).

Nevertheless, we must consider the key role played by the communicative aspect of Russia's security doctrine (Russian Federation, 2000, 2016; Veebel, 2015), as well as its widely documented disinformation campaigns (Paul and Mathews, 2016; Erlich and Garner, 2021; Bartles, 2016; among others). Furthermore, the European Union has imposed sanctions on Russia in four areas, one of which is the information realm, which are the following: individual sanctions, economic sanctions, media restrictions, and diplomatic measures (European Council, 2021). The sanctions began in 2014 with the Donbas war and the annexation of Crimea by Russia, and intensified with the Russian invasion of Ukraine in March of 2022 (Council Regulation (EU) 259/2022 of February 23, 2022). The resurgence of geopolitical tension is therefore evident, as well as the current hybrid confrontation in which the media and information are of vital importance, although disinformation spills over into geopolitics, and vice versa.

The link between communication and war has taken shape with various government measures against disinformation. On March 4, 2022, the Moscow Duma passed a law punishing the dissemination of fake news with up to 15 years in prison. In fact, the Russian government closed the Dozhd channel and the Echo of Moscow radio station for "high treason" and spreading false information about Russia's military action (Martino, 2022). Moreover, the Russian communication regulatory agency blocked access to Twitter and Facebook. All of this led to the exit of several media outlets, including the BBC, CNN, and Bloomberg News (Darcy, 2022). On March 8, 2022, Josep Borrell promised to enact measures to sanction external disinformation, support

independent media, and address fake news in European foreign policy (European Union External Action, 2022). On May 30 and 31, the European Council approved additional sanctions, including the suspension of broadcasting in the EU of three Russian state-owned broadcasters (European Council, 2022a). These measures have given even greater weight to social networks as an information medium (Magallón-Rosa et al., 2023).

Since 2014, Russian disinformation campaigns, especially regarding Ukraine, have been characterized by four key aspects: (1) a large number of channels and messages; (2) falsehoods and half-truths; (3) rapid, continuous, and repetitive false reports; and (4) a lack of commitment to consistency (Paul and Matthews, 2016). The main targets have been Ukraine, Syria, NATO, and EU countries (Khaldarova and Pantti, 2016; Erlich and Garner, 2021).

The use of a multitude of channels and sources stands out, including social networks, conventional media, radio, blogs, journalists, etc., as well as all types of formats, such as text, video, audio, and images using multiple languages (Paul and Matthews, 2016). The authors of the present study (2016) previously pointed out that the goal is not to provide an overriding truth, but rather to diffuse a combination of false elements and half-truths, without the need for coherence between messages and statements. Erlich and Garner (2021) have identified four essential disinformation strategies used by the Kremlin: anti-Ukraine, anti-Western, pro-Russian, and true information.

According to Meiselman et al. (1987), and later cited by Erlich and Garner (2021), Russian disinformation focusses on in three key areas: political, military, and economic. Erlich and Garner (2021) have included a fourth key area, which consists of linking Ukraine's leaders to Nazi ideological movements associated with the country's historical past. This narrative is based on the powerful message of the Soviet Union as the safeguard against Nazism and its allies. The tactic of calling Ukrainians "Nazis," and focusing on a particular person, known as name-calling, is strategically used in the so-called "memory wars" (Koposov, 2017), as it ties in with the creation of historical narratives. In the words of Magallón-Rosa et al., "the main Russian disinformation narratives found after the Euromaidan protests in 2013-2014 have focused on portraying Ukraine as a Nazi state, a failed state, and a non-state" (2023: 4).

All images and videos about the conflict have circulated on various social networks, with TikTok playing a key role (Evans, 2022; Kavenius, 2023; Steel et al., 2023). Some indicators suggest that the Chinese-origin social network has consolidated itself as a leading global platform for the following reasons: it has grown substantially in the number of new users in recent years (Mansoor, 2022); it has been the most downloaded mobile platform worldwide for three consecutive years (Sensor Tower, 2023); and it has increased its annual usage time, especially among Generation Z and Alpha users (Qustodio, 2023). This has secured a prominent place among young internet users, a group that is vulnerable to disinformation (López-Martín et al., 2022). On the other hand, the rise of TikTok is also due to the success of the audio-visual format, or video, in various contexts, as well as its massive level of consumption in recent years (Kalogeropoulos et al., 2016; Raun and Petersen, 2021).

The informational use of social networks began in 2007 (Guallar, 2008) and has progressively increased to the present day (Mayoral and Edo, 2015), where younger generations prefer social networks and audio-visual content rather than watching conventional news (Galán et al., 2019). In this regard, TikTok has experienced a qualitative and progressive change from videos that last 15 seconds to videos now lasting up to 30 minutes. This change has led to a wide variety of topics, along with a

combination of information and entertainment. In fact, the latest data reveal a substantial increase in news consumption on TikTok (Newman et al., 2023; Matsa, 2023).

Like other social networks, TikTok has become a massive vehicle for disinformation. For this reason, the platform has taken various steps and formed alliances to try to curb the problem (Herencia, 2020; Hook et al., 2022). In fact, TikTok formed a collaboration with fact-checking agencies before the 2020 U.S. elections (Bélair-Gagnon et al., 2023). The importance of these agencies gained momentum worldwide in 2015 with the creation of the International Fact-Checking Network (IFCN) at the Poynter Institute (Graves and Cherubini, 2016), and they have since become a key player in the current media system as a result of the increase in information disorders (Wardle and Derekshan, 2017). Other trends have also emerged, such as the never-ending prominence of social networks and the increase in news consumption that takes place there.

The Spanish agencies registered as IFCN members are Newtral, Maldita, EFE Verifica, and Verificat. According to some authors, Newtral and Maldita are the two largest platforms in Spain, not only due to their size, but also because of the diverse areas they cover and their commitment to “democratic and civic structuring in Spain” (López-Pan and Rodríguez-Rodríguez, 2020: 1057). Their link to democratic and civic values were also reflected by Graves et al. (2023) on the social role that agencies play in terms of public health and reason in a context of proliferating digital disinformation. Based on statements from the agencies themselves, these authors (2023) distinguish between two types of fact-checking: that which is related to political discourse, which fosters public reason and requires deep and nuanced understanding and explanations; and fact-checking focussed on debunking anonymous false information on social networks, which pursues public health issues by stopping the most dangerous fake news from the point of view of democracy and civic life.

In this context, military conflicts pose a challenge for the activity of fact-checking, due to the complexity of armed conflict and the infiltration of partisan and polarised positions in the media, politics, and society. Moreover, the humanitarian component and potential consequences of disinformation and fact-checking impose an ethical constraint that is not present among other topics (Varas and Castillo, 2007). An armed conflict adds another difficulty: the “fog of war”, a term coined by Clausewitz as far back as 1832 (Clausewitz, 2015), which refers to the informational confusion that inevitably occurs in all wars for various reasons, above and beyond the propagandistic efforts of the parties involved.

1.1. State of the issue

Russian disinformation has been extensively addressed by numerous authors, especially since the Donbas war in 2014 and Russia’s annexation of Crimea. Noteworthy authors include the following: Paul and Matthews (2016); Erlich and Garner (2021); Bartles (2016); Duncan (2017); Hjorth (2019); and Veebel (2015), among others. These researchers have delved into informational operations targeting NATO countries, especially during the 2016 U.S. presidential campaign, as well as in the European Union and Catalonia (Hjorth and Adler-Nissen, 2019; Magdin, 2020; López-Olano and Fenoll, 2019). Interest in this topic has grown significantly since the Russian invasion of Ukraine began (Dov Bachmann et al., 2023; Yablokov, 2022), with some studies focusing on the role of social media in the diffusion of disinformation (Pierri et al., 2023; Astuti et al., 2022).

Research by García-Marín and Salvat-Martinrey (2023) focusses on war disinformation gathered by the collaborative content verification project known as #UkraineFacts, the findings of which are comparable to the present study. The main areas

identified (2023) are related to the military, international affairs, civil society, and *ad-hominem* attacks, with military topics taking centre stage, followed by reactions from the civilian population.

Previous research concurs on the point that fact-checking primarily focuses on information circulating on social networks, with only scant verification of mainstream media or official statements (García-Marín and Salvat-Martinrey, 2023; Magallón-Rosa et al., 2023). There is also consensus that a false context is currently the most common type of disinformation in the Ukraine conflict. Furthermore, both image and audio-visual formats are dominant in the fact-checking efforts related to the Ukraine war by Spanish agencies (Magallón-Rosa et al., 2023). Disinformation collected during the first four months of the war shows a certain balance between content that is pro-Russian (49.1%) and that which is pro-Ukrainian (44.8%) (García-Marín and Salvat-Martinrey, 2023).

Regarding media coverage of the war by the BBC and RT, the analysis concludes that information about the conflict often lacks a scientific rationale, based on the following findings; there are high levels of polarisation fuelled by an *us vs. them* narrative as a confrontational resource; sensationalism is overused; underlying causes of the conflict are omitted; and there is a “sharp division between the perception of good and evil in the conflict” (Lara-Aguilar et al., 2023: 94).

In terms of social networking, numerous authors have found TikTok to be a social network where false or misleading information is spread, especially since COVID-19 (O’Sullivan et al., 2022; Basch et al., 2021; Alonso López et al., 2021). Others have focused on how fact-checking platforms use TikTok, yet this is still an emerging area without systematic literature. Lu and Shen (2023) have analysed Chinese fact-checkers on TikTok based on three areas: audio-visual content, persuasive strategies, and engagement metrics. The results show that agency posts tend to be faster-paced than the videos of other accounts, and they use various persuasive strategies as well. Sidorenko Bautista et al. (2021) have compared themes among international agencies, while Arrieta-Castillo and Rubio Jordán (2023) have delved into narratives, topic areas, and the impact of posts published by Ibero-American agencies.

In short, previous research has addressed the role of TikTok, Spanish fact-checkers, and verification agencies in the Ukraine war. The novelty of the present study is that it analyses all three aspects together: the work of Spanish fact-checking agencies; specifically on TikTok; and precisely focussed on the Ukraine war.

2. Methodology

The overall objective of this study is to analyse the specific features of the fact-checking endeavour conducted by agencies on TikTok regarding the Ukraine war. This general objective has been broken down into four specific objectives as follows: (1) analyse the disinformation verified by these agencies; (2) identify the topics of the verifications; (3) examine the approaches and purposes of agencies when verifying war-related disinformation; (4) identify potential differences among Spanish agencies.

Previous research has allowed us to anticipate some of the results, such as the prevalence of false contexts, the prominent use of audio-visual formats, anonymous content circulating on social media, and certain topics related to Russian disinformation. However, as the previous literature on TikTok verification during the Ukraine war is not sufficiently consolidated, specific

hypotheses have been avoided, and four research questions have been formulated instead, as they are more suitable for exploratory research and enable the discovery of findings not initially considered.

RQ1: What type of disinformation on the Ukraine war do Spanish fact-checking agencies verify on TikTok?

RQ2: What are the topics of these verifications?

RQ3: Do Spanish fact-checking agencies on TikTok engage in work that promotes public health and reason in terms of the ideas set forth by Graves et al. (2023)?

RQ4: With regard to the three previous questions, are there significant differences among Spanish agencies?

The methodology used for this research was exploratory, descriptive, and quantitative, specifically using content analysis. The methodological design, including variables and categories, was developed and tested in a previous study, which is the following: “Methodology for content analysis of fact-checking agencies on TikTok” (Hidalgo-Cobo & Puebla-Martínez, 2024). This method has been widely used to analyse TikTok (Basch et al., 2022), and specifically to study its use by fact-checking agencies (Arrieta-Castillo & Rubio Jordán, 2023; Alonso López et al., 2021).

The results obtained through inductive coding are presented descriptively, while various statistical parameters have been applied to achieve outcomes aligned with the initial objectives. Specifically, the chi-square independence test was applied to different agencies and specific variables (thematic areas, formats, etc.), in order to determine whether agencies display significant differences or follow a similar distribution.

The sample was delimited based on three criteria: geographic and spatial selection; choosing the most prominent fact-checking agencies; and, given the topic, selecting an appropriate time frame (Hidalgo-Cobo & Puebla-Martínez, 2024). The research focuses on verifications conducted by Spanish agencies, specifically those who are registered members of the IFCN, due to its status as the benchmark of fact-checking with stringent requirements for transparency and methodology. Four agencies with active TikTok accounts were selected: EFE Verifica (@efeverifica), Maldita.es (@malditobulo), Newtral (@newtraltiktok), and Verificat (@desfake).

Regarding the time frame of the sample, as Russia’s invasion of Ukraine occurred on February 24, 2022, all posts published by these four fact-checking agencies during the first year of the conflict were analysed. In addition, as there was significant activity both in the month before the conflict and in the month following the end of the first year of the war, the time frame was extended from one month before the conflict began until one month after its first-year period ended. In total, 652 posts published by these agencies from February 1, 2022, to March 31, 2023, were reviewed, among which 69 posts addressed the topic of Ukraine, with a total of 91 verifications carried out in the posts.

Therefore, the unit of analysis comprises verifications related to the Ukraine war in posts published by these four agencies during the specified period. Posts that mention the war tangentially, or incidentally, were excluded. The robustness of the sample lies in analysing all posts published on the topic without selective sampling of specific posts or verifications.

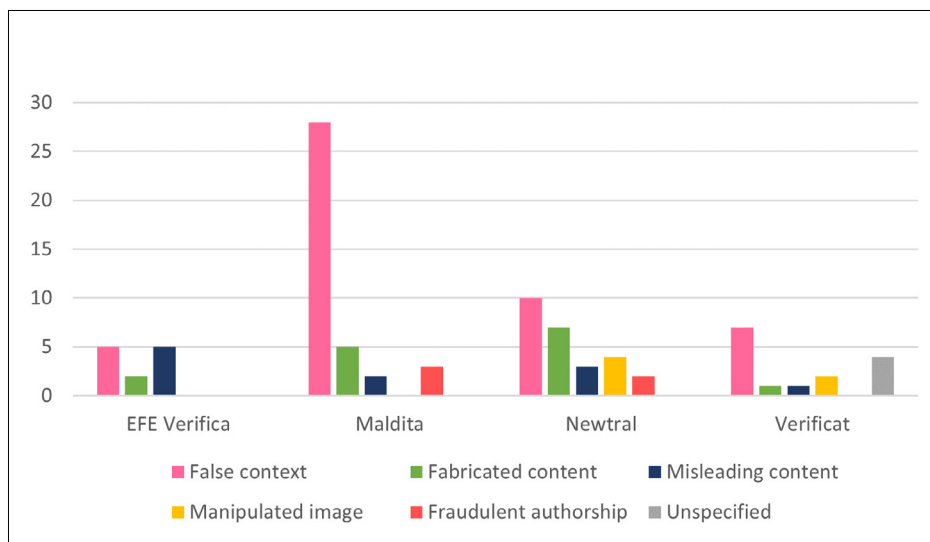
To perform the content analysis, variables were coded to encompass general post information, thematic areas, specific issues, the countries involved, politicians by name, type of disinformation, medium of circulation, specific source, disinformation format, and verification outcome. Categories for the variable of Disinformation Type are based on Wardle and Derakhshan

(2017), although all categories emerged from the inductive coding process in order to accommodate the analysed sample and extract qualitative nuances.

3. Results

More than half of all the verifications conducted by the four Spanish agencies on TikTok regarding the Ukraine war contain a false context, which is the most common type of disinformation (56.1%). This type of false information typically involves a visual format, such as image or video. To a far lesser extent, the agencies verified fabricated content (16.5%) and misleading content (12.1%). The remaining verifications include manipulated images or videos (6.6%), and fraudulent authorship (5.5%). In 4.4% of the cases, the type of disinformation is not specified, as it only refers to false information in a general or implied way.

Graph 1. Type of disinformation by agency

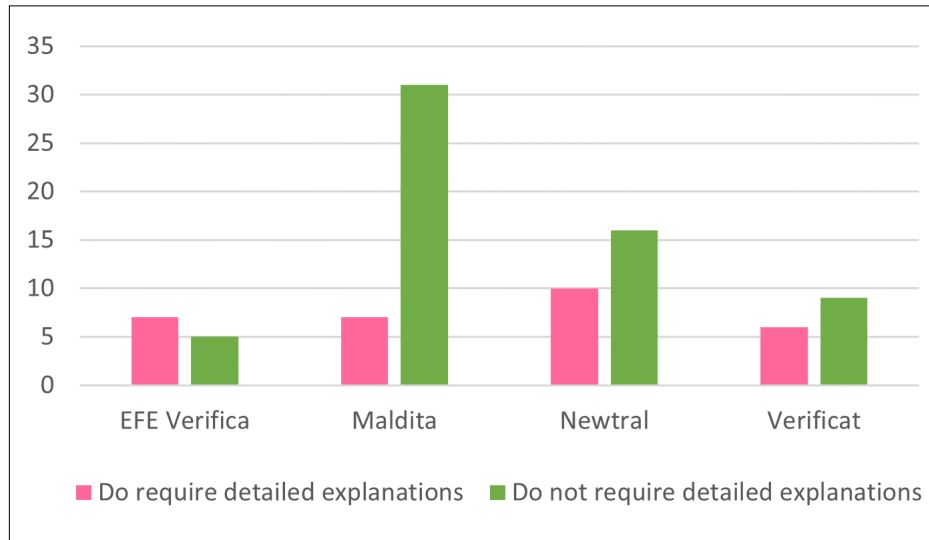


Source: created by the authors based on data from TikTok

The distribution by agency clearly shows that all four fact-checkers prioritize verifications on disinformation consisting of false contexts. The remaining types of disinformation display a heterogeneous distribution that varies significantly according to each agency, as depicted in Graph 1.

The type of disinformation verified also provides valuable information, as certain types allow for quick debunking (false context, manipulated image, and fraudulent authorship), while others require more detailed explanations and nuances (misleading content, fabricated content, and meta-verification).

Graph 2. Types of disinformation that require detailed explanation by agency



Source: created by the authors based on data from TikTok

If we group the types of disinformation into these two categories, we observe that EFE Verifica is the only agency where more verifications require detailed explanations. However, the overall trend is to concentrate verifications on disinformation that can be easily debunked.

Figure 1. Types of disinformation that require detailed explanation by agency

Chi-square test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,823 ^a	3	,050
Likelihood ratio	7,934	3	,047
N of Valid Cases	91		

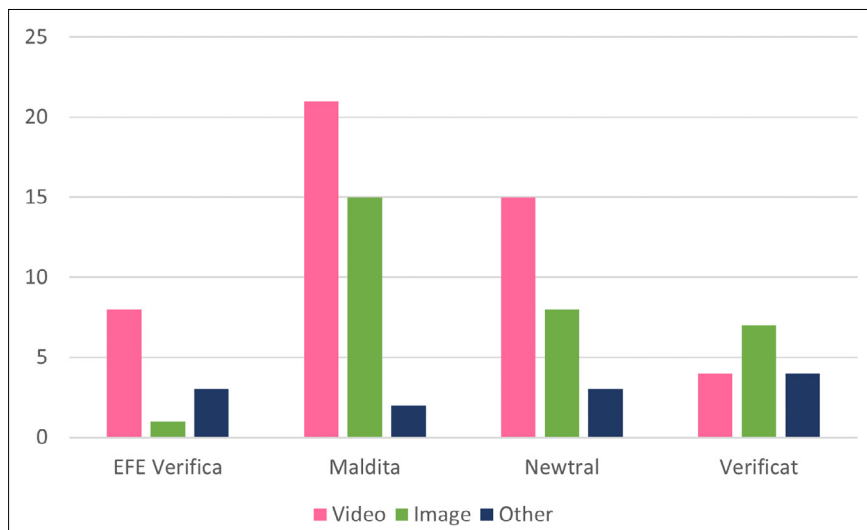
a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.96.

Source: data coded by the authors using SPSS

The chi-square independence test shows a p-value of exactly 5% (0.05), indicating that we cannot reject the hypothesis at the 99% significance level, and it is precisely at the boundary of rejection at the 95% significance level. Therefore, the results are not conclusive, yet they do indicate a general trend among the four agencies toward verifying disinformation that can be quickly debunked.

The most frequently verified disinformation format is video (52.7%), as well as image and photography (33%), with a much smaller number statements, news, texts, or other formats (14.3%). It is striking that video is dominant in all the areas (military, humanitarian, international), except in denigrating images, where photography is prevalent (50% compared to 30% for video).

Graph 3. Disinformation format by agency



Source: created by the authors based on data from TikTok

The distribution among the four agencies shows a considerable dominance of video fact-checking, with Verificat being the only agency that checks more photos than videos. Disinformation in the form of images or photographs is quite frequent among all agencies (39.5% in Maldita; 30.8% in Newtral; and 46.7% in Verificat), except for EFE Verifica, which reaches only 8.3%.

Figure 2. Disinformation format by agency

Chi-square test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.182 ^a	6	.083
Likelihood ratio	12.314	6	.055
N of Valid Cases	91		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 1.58.

Source: data coded by the authors using SPSS

The chi-square independence test between the variables “format” and “verification agency” yields a p-value of 0.083, which is above 0.05. Therefore, we cannot reject the null hypothesis at the 95% confidence level. There are four cells with values below five, although only one (8.3%) has a value below the expected minimum count of 1.58. The interpretation of the test indicates that the agencies follow a similar distribution regarding the disinformation formats they verify.

The vast majority of verifications focus on information circulating on the internet (41.8%) and on social media (37.4%). In 17.6% of the cases, the source is unspecified, and very occasionally there are verifications from newspaper articles (2.2%), and one from TV (1.1%). In contrast, there are no verifications of statements made by the politicians involved.

Regarding specific sources, they often do not name the exact social network, as the same disinformation may appear on multiple platforms. Specific sources mentioned occasionally include Twitter, Facebook, Telegram, Google, and digital portals. Specific individuals or organisations mentioned include a Ukrainian lawmaker, the Deputy Ambassador of Russia to the UN, a Ukrainian journalist, Antena 3 (a Spanish TV channel), and La Repubblica (an Italian newspaper).

The results of the verifications indicate the extent to which nuanced and in-depth explanations are provided. The research shows that nearly all verifications (96.7%) find some amount of fake news. Labels indicating nuances (e.g., misleading, partially true, true but, etc.) are used in only three verifications (3.3%), and none of the verifications have found the information to be completely true.

Table 1 presents the thematic areas covered in the posts, broken down into sub-topics. One notable observation is the homogeneity of the sub-topics verified by the agencies, which can be easily categorized into four main areas: military matters; humanitarian and civilian issues; denigrating images of the opposing side and its leaders; and international topics related to military or diplomatic support from third-party countries.

Table 1. Thematic areas and sub-topics

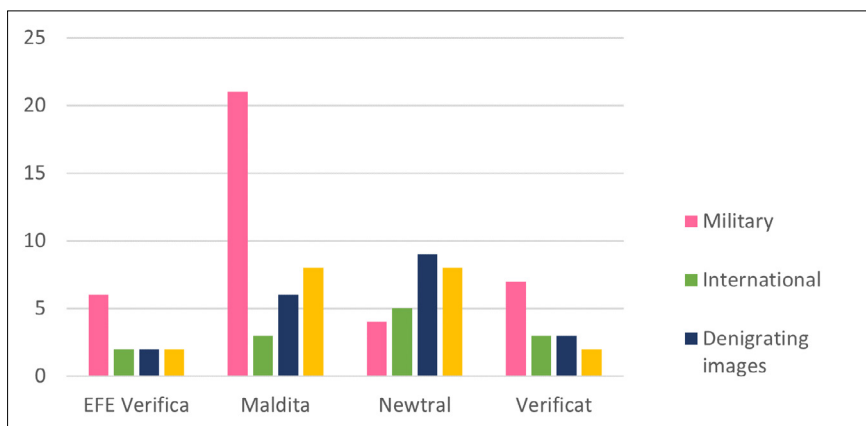
Thematic Area	No.	Freq.	Sub-topic	No.	Freq.
Military	38	41%	Attacks	25	27,5%
			Lack of ethics	4	4,4%
			Military units	5	5,5%
			Military success	4	4,4%
Humanitarian	20	22%	Victims	2	2,2%
			Refugees	2	2,2%
			Civilian population	4	4,4%
			Children	4	4,4%
			Others	8	8,8%

Denigrating image	20	22%	Zelensky	5	5,5%
			Ukrainian Nazis	4	4,4%
			Putin	11	12,1%
International	13	14,3%	International threat	4	4,4%
			Diplomatic support	1	1,1%
			Military support	6	6,6%
			Social support	2	2,2%

Source: created by the authors based on data from TikTok

The military is the most prominent thematic area, accounting for 41% of all verifications. Within this section, military attacks are by far the most frequently addressed issue. It is noteworthy that in 83.8% of the verifications within the military section, the disinformation is related to false contexts. In most cases, the false information is debunked, although specific details about the attacks or their perpetrators are not specified. At another level, several issues have a certain amount of weight, such as debunking claims associating Ukrainians with Nazism (9.6%), addressing civilian casualties from a humanitarian perspective (7.7%), and examining the alleged military support from allied countries to one of the two sides (6.7%).

Graph 4. Thematic areas addressed by agency



Source: created by the authors based on data from TikTok

As seen in Graph 4, the distribution of diverse thematic areas among the agencies shows certain differences. For instance, Newtral places more emphasis on posts related to denigrating images and humanitarian issues, while posts on military matters

are less prominent. However, common patterns can also be observed. For example, Verificat and EFE Verifica have nearly identical distributions. Moreover, three of the agencies display a similar distribution pattern, with a relatively strong emphasis on military issues, and less emphasis on humanitarian/civil matters, denigrating images, and international concerns. Moreover, posts related to international involvement in the conflict display only modest representation among all the agencies.

To strengthen the chi-square test, EFE Verifica and Verificat data have been combined into a single variable, which is feasible and recommended due to their nearly identical distribution and the small sample size. As shown in Figure 2, the results of the chi-square test yields a p-value of 0.054, which is above 0.05, indicating that we cannot reject the null hypothesis of independence at the 95% confidence level. The interpretation of the test results reveals that the agencies generally exhibit similar distributions of thematic areas, suggesting no statistically significant differences among them.

Figure 3. Thematic areas by agency

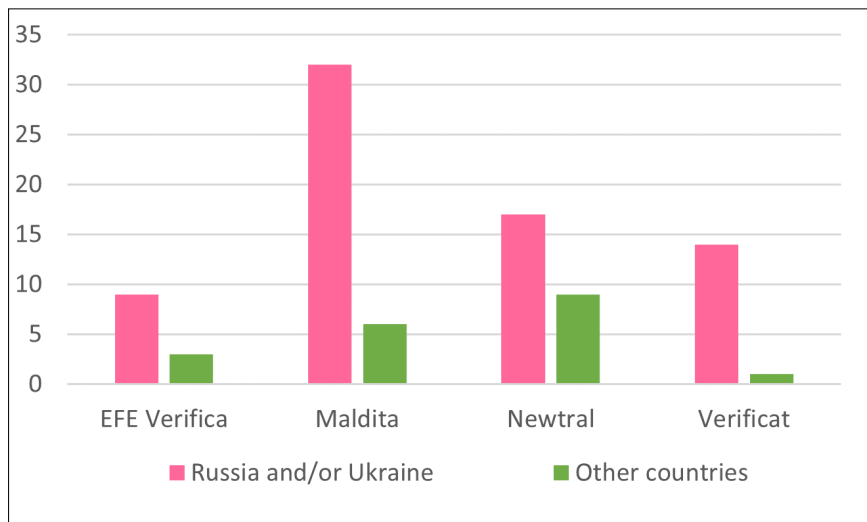
Chi-square test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.383 ^a	6	.054
Likelihood ratio	13.527	6	.035
N of Valid Cases	91		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 3.71.

Source: data coded by the authors using SPSS

The variables related to countries and specifically-named politicians are very descriptive, as there is a notable prominence of the two presidents, Volodymyr Zelensky and Vladimir Putin, with very few verifications mentioning other leaders or countries. The political figures most prominently featured in the verifications are Zelensky (12.1% of the total) and Putin (7.7%), while in 78.1% of the verifications no politician is named. Martin Schulz and Joe Biden are mentioned in only one verification each (1.1%), which are rare exceptions. Among all four agencies, this trend is similar: EFE Verifica does not name even one politician in 91.7% of its verifications; Maldita in 86.8%; Newtral in 57.7%; nor Verificat in 80%.

Graph 5. Countries mentioned by agency



Source: created by the authors based on TikTok data

The data are very similar when considering the countries or regions mentioned: in 79.1% of the verifications, there is no explicit reference to any country other than Ukraine or Russia. All the agencies follow this trend: 75% of the fact checks carried out by EFE Verifica do not name other countries; the rate is 84.2% for Maldita; 65.4% for Newtral; and 93.3% for Verificat. When other countries are mentioned, the most frequently named is Qatar (4.4%), probably due to the World Cup and alleged Ukrainian Nazi fans. In second place at 2.2% are Finland, Spain, Poland, the USA, and NATO, which are named in two verifications each. The remaining countries appear only once, at 1.1%, which include Turkey, Germany, France, Moldova, and North Korea.

Figure 4. Countries mentioned by agency

Chi-square test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.523 ^a	3	.137
Likelihood ratio	5.714	3	.126
N of Valid Cases	91		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.51.

Source: data coded by the authors using SPSS

In Figure 4, the chi-square test of independence statistically confirms a similar distribution. The p-value of the test is 0.137, which is above 0.05. Therefore, we cannot reject the null hypothesis of independence, confirming that the frequency of verifications naming other countries is not specific to any particular agency. Instead, all the agencies display a comparable distribution in this regard.

4. Discussion

4.1. *What type of disinformation about the war in Ukraine do Spanish agencies verify on TikTok?*

The results obtained confirm previous research (García-Marín & Salvat-Martinrey, 2023; Magallón-Rosa et al., 2023), which has found that false contexts are the main type of disinformation in the Russo-Ukrainian conflict, far beyond other types. In this regard, it bears mentioning a quote from Magallón-Rosa et al. (2023: 3):

The proliferation of news content makes it extremely difficult to identify the origin and authorship of information, which reinforces the role of imagery as the core of a collective, illustrated narrative, rather than one that is narrated (Rodríguez-Tranche, 2019). Although photographs are assumed to guarantee maximum objectivity, they are actually subject to image manipulation (Caballo-Méndez; De-Santiago-Mateos, 2021), often leading to a lack of contextualisation, which is a major threat when interpreting distant realities with a far-reaching impact, as in the subject under study

During fieldwork and inductive coding, a distinct typology was identified, which exhibits specific features in covering military conflicts, primarily involving a dialectic of verification, argument, and counterargument on a specific event. This meta-verification typology, which verifies disinformation by claiming something is false when it is not, was found in eight (8.8%) of the verifications: four from Newtral, two from Maldita, one from EFE Verifica, and one from Verificat. Notably, seven of these eight verifications specifically address victims of the conflict (Humanitarian section).

Consistent with the predominance of false contexts, this study confirms that formats which are visual (images) and audio-visual (videos) are the prevalent means of disinformation, with very few instances exclusively containing text or statements. The research provides a nuanced perspective, as the proportion of videos compared to images in this study is higher than that of previous investigations linked to Spanish fact-checking agencies, yet those studies did not focus specifically on TikTok (Magallón-Rosa et al., 2023).

Thus, when communicating on their TikTok accounts, agencies prioritise audio-visual content over visual or text formats. This pattern is consistent with all the agencies except Verificat, where photography dominates. The demands of a younger audience and the dynamic pace of TikTok (Lu & Shen, 2023) may explain the overall dominance of the audio-visual format.

It bears mentioning the considerable absence of detailed information regarding the purpose of disinformation. Previous research (García-Marín & Salvat-Martinrey, 2023) indicates a similar amount of disinformation coming from both sides, which has been confirmed by thematic analysis. However, Spanish verification agencies do not explicitly indicate in their TikTok posts whether disinformation is pro-Russian or pro-Ukrainian, regardless of whether it may be obvious or inferred at times. With regard to Russian disinformation, Erlich and Garner (2021) distinguish between information that is anti-Ukrainian,

anti-Western, pro-Russian, and true information. In this regard, TikTok posts often do not provide sufficient information to contextualise disinformation and classify it based on its origin and purpose.

4.2. What are the themes of these verifications?

Recent studies on disinformation in the Russo-Ukrainian conflict have yielded results that are in line with the findings of this study, although with certain nuances. García-Marín and Salvat-Martinrey (2023) have identified six main thematic areas that broadly coincide with those obtained in this research: military attacks, international community reactions, military outcomes, civilian reactions, non-military decisions, and distorted or denigrating images of the main individuals involved.

The present study highlights the dominance of military attacks, which is consistent with previous research (García-Marín and Salvat-Martinrey, 2023; Magallón-Rosa et al., 2023). Likewise, the findings of this paper regarding the importance of the international and humanitarian area are comparable with those obtained by García-Marín and Salvat-Martinrey (2023).

According to Neuman et al. (1992), there are four major generic frames that dominate the coverage of critical issues: conflict, economic consequences, human interest, and morality. Verifications on TikTok address conflict, aspects of human interest, and morality (e.g. the issue of a “lack of ethics”, which includes verifications of especially deplorable and serious acts). However, there was a notable absence of economic consequences.

Content with high emotional impact contrasts with the limited importance given to political, economic, and historical issues that delve into the causes and consequences of the conflict. In this sense, the high number of military and humanitarian topics can also be interpreted in light of the conclusions of Lara-Aguiar et al. (2023), which highlight the sensationalist coverage that the conflict has received from major media outlets.

With regard to denigrating imagery, the connection to Nazism is confirmed as one of the major topics of online disinformation about the war (García-Marín and Salvat-Martinrey, 2023), which is a classic Kremlin strategy (Erlich and Garner, 2021), and one of the main narratives verified by Spanish fact-checking agencies (Magallón-Rosa et al., 2023). This research shows how both sides use the two tactics of denigrating the opposing leader and linking the enemy to Nazism, although Russian disinformation in this regard is more prevalent, due to its defining feature as the Russian narrative in Ukraine (Erlich and Garner, 2021).

The politicians and countries named in the posts provide us with information about the topic features of the verified content. There is a notable absence of politicians and international actors other than the presidents of Ukraine and Russia, despite the significant roles played by various world leaders. Furthermore, the position of the Spanish government and its national policy with regard to the Ukrainian crisis is barely reflected in the verifications. The limited emphasis on third-party countries is even more noticeable than in previous research on the role of Spanish agencies in the Ukrainian conflict (Magallón-Rosa et al., 2023). In summary, the scant presence of disinformation related to Spain and its stance on the war stands out, as well as the absence of other countries and politicians whose roles have been crucial.

4.3. Verification of the Ukraine war on TikTok: public health or public reason?

In accordance with the latest theoretical contribution on the state of verification agencies by Graves et al. (2023), we also differentiate between debunking and fact-checking. The vast majority of verifications are aimed at unmasking false information

that circulates online, yet without scrutinizing political discourse. Moreover, 96.7% of the findings are categorically false, often verified in a few seconds or as part of compilations where multiple verifications are conducted in a single post.

Within these parameters, the verification work carried out by Spanish agencies on TikTok adheres to the logic of debunking, focusing on online content circulating with the primary aim of halting false information, although not necessarily providing in-depth explanations. According to these definitions, the agencies do not engage in the specific task of political fact-checking, which would involve holding politicians accountable and fostering healthy democratic debate. Instead, their aim is oriented toward public health goals.

This approach reflects a more paternalistic attitude, prioritising the prevention of virality of certain content due to its seriousness or potential negative impact on the democratic health of society. Moreover, this is applicable to the context of war, in which fake news might have humanitarian consequences. Additionally, the approach taken does not enable an understanding of wars in all their complexity, which include aspects that are militaristic, geo-economic, political, cultural, diplomatic, historical, ideological, and so on.

4.4. Differences and similarities between Spanish agencies

This comparative analysis of the agencies provides a general overview of the verification dynamics of Spanish IFCN fact checkers regarding the Ukraine war, as well as specific features and differences among them. The analysis of descriptive data and chi-square independence tests reveal generally similar activity among the four agencies. Specifically, they mostly verify false contexts and display the following features: a similar distribution across thematic areas; a comparable frequency of verification in which countries other than Ukraine and Russia are named; a prevalence of audio-visual formats over text; and much greater emphasis on video than images.

Newtral displays a distinct profile in terms of topics, as it verifies more false information related to denigrating images and humanitarian issues, and is the only agency in which the military section is not the most frequent. It also has the highest percentage of verifications regarding countries other than Russia and Ukraine (34.6% compared to the average of 20.9%). EFE Verifica stands out as the agency with the highest proportion of video verifications, and the only one that carries out more verifications of disinformation that require more detailed explanations and nuances, such as misleading or fabricated content and meta-verifications.

By contrast, a high percentage of the disinformation revealed by Maldita can be verified quickly, such as false contexts, manipulated images, and fraudulent authorship. It also has the highest proportion of false contexts, with more focus on the military, and it verifies the least amount of non-audio-visual formats such as text, statements, etc. In this regard, Maldita's approach to public health is more evident, as it prioritises rapid and extensive debunking of rumours about the war. In fact, it conducts the highest number of verifications. Moreover, according to López-Pan and Rodríguez-Rodríguez (2020), not only are Maldita and Newtral considered the two largest platforms in Spain, they are also the most active agencies on TikTok in terms of the number of posts and verifications.

5. Conclusions

This study confirms the results of other research on verifications in the Ukraine war. Furthermore, it offers nuances to the results of previous work, mentions some findings that are unique to this research, and uncovers some significant shortcomings.

Firstly, this research confirms the dominance of the audio-visual format, military topics (especially specific attacks), and the typology of false contexts as the most frequent types of disinformation in the Ukraine war and in verification posts. A high percentage of the false contexts consist of videos unrelated to the conflict that are presented as part of the war. Although these verifications can be carried out quickly and easily, they fail to offer in-depth explanations about the dynamics of the conflict.

Secondly, denigrating images and the link to Nazism take on significant importance in the verifications of all the agencies, thus confirming the use of certain typical narratives of disinformation campaigns. However, we must mention that this same strategy is also used against Russia and its president Vladimir Putin, although to a lesser extent,

The research questions posed have led to certain findings related to issues that were not originally addressed. For example, the four Spanish agencies generally show similarities in their approach to the Ukraine war, especially according to the type of disinformation verified, themes, and formats. Furthermore, the public health approach of the agencies is evident, which implies greater efficiency and faster response time in debunking false information, yet it prevents in-depth analysis. This research has also discovered a much greater focus on video in the verifications conducted by the agencies. This appears to be an attempt to use a more dynamic style with an emphasis on audio-visual content in order to adapt to the TikTok social network and/or younger audiences. In addition, meta-verification, which is a kind of battle for the narrative and the truth, has also been identified as a typology of disinformation specific to military conflicts.

Finally, most notably absent from the verifications are the countries and politicians who have played an important role in the war, in addition to a shortage of background issues related to economics, politics, history, and war, as well as the stance taken by Spain and its politicians on the conflict. Moreover, the verifications analysed do not always indicate which side generated the false information, nor the context of the disinformation, nor the narratives or information which, although misleading, are not entirely false.

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7. Specific contributions of each author

	Name and Surname
Conception and design of the work	Pablo Hidalgo-Cobo and Belén Puebla Martínez
Methodology	Pablo Hidalgo-Cobo and Belén Puebla Martínez
Data collection and analysis	Olga Serrano Villalobos
Discussion and conclusions	Pablo Hidalgo-Cobo and Olga Serrano Villalobos
Drafting, formatting, version review and approval	Olga Serrano Villalobos

8. Conflict of interest

The authors declare that there is no conflict of interest contained in this article.

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