



Disinformation Linking Migration and Crime in Spain: Classic Moral Panics in a New Digital Ecosystem

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Abstract

This article addresses the impact of social networks on the propagation of disinformation surrounding immigrants and their connection to crime in Spain, emphasizing whether the new media context has altered the classic processes of moral panic formation. To this end, we consulted the database of hoaxes constructed by Maldita, the Fact-Checking Agency, and conducted a dual analysis. The first analysis was a time series analysis, and the second was a content analysis of the hoaxes. The findings suggest that the contemporary digital disinformation phenomenon manifests in irregular 'waves', which do not directly correspond to external media events. Furthermore, while the topic of crime remains a central element in the construction of moral panics, the current climate of polarization in the new media environment appears to see a shift in focus towards the dissemination of false information, attributing statements to both political and media agents regarding their stance on migration, rather than on the connection between migration and crime itself. This paper discusses the extent of these changes as well as the aspects that remain unmodified.

Keywords Moral panic · Migration · Crime · Welfare benefits · Disinformation · Misinformation

A New Digital Environment?

Social networks have transformed the way we communicate and consume information and, by reconfiguring the architecture of media-public interaction, they might be affecting the very perception of social phenomena and social issues, including those related to crime and criminal justice. Traditional media already influenced such perceptions by shaping narratives and agendas that influenced public opinion (Cohen, 1972; Young, 2009; Zielińska & Pasamonik, 2021, affecting, in turn, how public authorities used such perceptions to justify security and justice policies (Garland, 2008; Simon, 2007; Roberts et al., 2003; Tonry, 2009). A pertinent question, therefore, is whether the new

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media ecosystem changes the processes of interaction between social networks, media, public authorities and citizens in terms of the perception of crime and how to respond to it, as well as how it does so. The first step in this understanding requires a brief overview of the essential characteristics of this new ecosystem.

The initial optimism in some of the literature that the digital sphere had the potential to improve the ‘public sphere’ and democratise communication by incorporating greater citizen participation (Castells, 1997; Gerbaudo, 2018; Goode, 2009; Loader et al., 2014) has gradually turned into scepticism with the arrival of the first empirical evidence (González-Bailón & Lelkes, 2022). This even led to pessimism when it was considered that the design of the networks, which often focused on images, videos or short texts, made it difficult to share complex discourses and hold elaborate debates on these platforms, which led to discussions of a very low quality, characterised by hyperbole and emotionality, as well as a simplification of discourses across the political spectrum. (Berry & Sobieraj, 2013; Nithyanand et al., 2017; Theocharis et al., 2016). It has also been pointed out that affective polarisation might be increasing or at least increasing in impact due to the architecture of social media (Miró-Llinares, 2023; Walsh & Hill, 2022). Initially, some authors (Pariser, 2017; Sunstein, 1999; Zafrilla, 2022) pointed out that the structure of the networks, marked by algorithms that condition the messages to which subjects are exposed in order to obtain the maximum possible interactions (replies, likes, reposts, etc.), could be creating homogeneous communities, fostering polarisation and radicalisation as a consequence. Recent evidence has disputed this idea of echo chambers, or at least the mechanism by which polarisation would take place, by pointing out that these communities, far from being isolated from each other, tend to confront and clash with each other (Bail et al., 2018; Bruns, 2018; Waisbord, 2020) thus reinforcing their own positions.

And then there is misinformation. Over the last decade, social concern about the circulation of false information on social networks and its possible consequences has continued to grow (Miró-Llinares and Aguerri, 2021). According to different authors, phenomena such as misinformation—false information that is not created with the intention of causing harm (Murphy, 2023)—and disinformation—defined as ‘false, inaccurate or misleading information designed, presented and promoted for profit or to intentionally cause public harm’ (Matthes et al., 2022)—have gained prominence as a result of social networks. Although empirical evidence on the impact of disinformation in our society is still scarce (Aguerrri & Miró-Llinares, 2023), the fact that social networks facilitate the circulation of any type of information, including those of a false and malicious nature, is undeniable, just like the existence of actors who spread false information on social networks, either with an economic intention—generating monetizable web traffic through content that appeals to indignation or empathy (Freelon & Wells, 2020; Sánchez-Duarte & Magallón-Rosa, 2023), or with a social motivation—seeking to influence socially or support/discredit actors or political positions.—(Blázquez, 2000; Magallón-Rosa, 2019).

This digital structure that encourages simplified and emotional content seems to be a particularly suitable environment for the spread of alarms and moral panics about certain groups and their connection with crime, since it might be increasing affective polarisation, which facilitates the dissemination of misinformation (Freelon & Wells, 2020; Huang & Wang, 2020; Marwick & Lewis, 2017). The theoretical framework of moral panics (Cohen, 1972; Young, 2009) has traditionally been used to analyse the processes of public reaction to false or distorted information, especially when it is linked to certain vulnerable social groups. Despite the fact that traditional media was already involved in the construction of moral panics based on traditional misinformation (Zielińska & Pasamonik, 2021), given that the current communicative framework has been significantly transformed by digitisation, it is worth considering

whether it has also changed the way in which misinformation is spread and, therefore, how moral panics are constructed in the process.

Social media has changed how we communicate and, therefore, how images surrounding deviance or social consensus are constructed as well (Ingraham & Reeves, 2016; Walsh, 2020). According to Hier (2019) the transition to digital media could have altered the dynamics of moral panic production by introducing a “digital-media logic” that prioritizes virality, speed, and engagement. In this context, some authors suggest that the production of panics has become more diffuse and amorphous (Ingraham & Reeves, 2016). In addition, by allowing the intervention of a plurality of actors in the public debate and, moreover, offering incentives—in terms of relevance and even economic gains—for individuals to try to gain visibility, Social media is, as Hier (2019) points out, a perfect context for the emergence of new “moral entrepreneurs” who would no longer be as dependent on traditional media.

However, while this decentralisation of content production allows a wide range of users to participate in public discourse, it is important to acknowledge that many of the narratives circulating online still originate from institutional actors—such as law enforcement agencies, local governments, or political figures—who function as modern moral entrepreneurs. These actors often craft messages that are later amplified by both traditional and digital media due to their perceived newsworthiness, a dynamic that reflects long-standing patterns of agenda-setting described in earlier moral panic literature (Hall et al., 1978) and continues to operate in contemporary platform-based ecosystems (Walsh & Hill, 2022). Rather than replacing legacy mechanisms, digital media appears to reconfigure them, blending grassroots voices with top-down communication in complex ways.

This evolving interplay of actors, technologies, and narratives has also given rise to new configurations of moral panic. Zielińska and Pasamonik (2021) have coined the term ‘Polarizing Moral Panics’ to refer to the emergence of a new type of modern moral panic that arises from the confrontation between two moral communities, both as a product and a mechanism of social polarization. Unlike traditional panics, which were fueled by concrete events amplified by conventional media, polarising panics can originate from false or distorted information, without the need for an actual event to take place. These panics are maintained through mutual attribution of blame, with each group accusing the other of threatening the stability of the social order (Zielińska & Pasamonik, 2021). In these cases, the conflict between closed in-groups reinforces the pre-existing beliefs of each community and facilitates the transmission of information (Otten & Moskowitz, 2000). But these may not be the only elements that have changed in the dynamics of moral panics in the digital age. To delve deeper into this phenomenon, we will focus on one of the favourite objects of disinformation and also of the creation of moral panics, the relationship between crime and immigration. Using misinformation about crime as a context, this article will seek to approach moral panics in the current communicative ecosystem, specifically analyzing two dimensions of these phenomena: their temporality and, consequently, their relationship with “real” events; and their content, aiming to verify whether crime continues to hold the central role it has traditionally played in this type of phenomenon.

The Same Moral Panics?

The theoretical framework built around the concept of moral panic has allowed criminology to analyse phenomena related to disinformation and, especially, those in which false information involves vulnerable groups, such as migrants. Among the theoretical

approaches addressing the intersection between disinformation, media, and criminology, the one developed around the idea of moral panic stands out significantly. This concept, created by Young (1971) and popularised by Cohen (1972), refers to the processes through which the media create and amplify social problems. According to his original formulation, a moral panic occurs when “a condition, episode, person or group of people emerges to be defined as a threat to social values and interests” (Cohen, 1972, p. 1).

The theory of moral panic highlights the critical roles of public opinion and the media as intermediaries capable of fuelling societal outrage, thereby shaping norms and measures. This perspective extends beyond specific criminal behaviours to explore broader cultural dynamics. Young (2009) examined how spirals of fear and outrage could be triggered, citing the media’s portrayal of substance abuse not merely as a health issue but as a symbolic threat to social order. Similarly, Hall et al. (1978) offered a seminal critique of the construction of moral panic by analysing the societal reaction to “mugging” in Britain. They argued that the media and state apparatus worked in tandem to construct this phenomenon as a major social crisis, connecting it to broader anxieties about race, class, and urban decline. This approach underscored the ideological function of moral panics in legitimising punitive measures and reinforcing existing power structures.

The concept of moral panic has, however, been the subject of numerous and significant critiques. Scholars have questioned its theoretical precision, arguing that the term is often applied too loosely and risks becoming a catch-all label for any instance of media-driven social concern (Cricher, 2006; Garland, 2008). Others have highlighted its normative undertone, suggesting that the identification of a “panic” implies a kind of analytical superiority or hindsight bias (Hier, 2019). Moreover, in the context of contemporary digital media, the model’s reliance on clearly defined actors (deviant, victim, and moral entrepreneurs) and a singular triggering event has been seen as inadequate to account for the fragmented, ongoing, and often algorithmically amplified nature of online outrage (Goode & Ben-Yehuda, 1994; Walsh, 2020). The original formulations of this theoretical framework are now more than fifty years old and were developed within a communicative context vastly different from today’s. This raises the question of what has changed—and what remains—regarding the production of moral panics in the twenty-first century (Walsh, 2020), particularly with respect to their essential components and, specifically, in relation to the phenomenon of migration. It also opens the door to integrating some of the principal critiques concerning the validity of the construct. This article seeks to do precisely that by revisiting the three core elements identified by Cohen (1972) as central to the construction of moral panic: a suitable enemy, a suitable victim, and the belief that an incident or case represents the “tip of the iceberg” and that “something must be done.” The aim is to explore how these elements are being adapted—or perhaps reconfigured—within the contemporary digital environment.

Beginning with the “enemy,” this usually refers to the deviant, “evil or villainous” outsider, and offers a “visible reminder of what we should not be” (Cohen, 1972). Over the last quarter of a century, migrants have frequently been used as the basis for constructing these “folk devils,” blamed for multiple social ills such as unemployment, cultural conflict, criminality, or terrorism (Simon, 1983; Martínez & Lee, 2004; Walsh & Hill, 2022). At the same time, these stigmatising discourses of immigration construct contemporary European societies as ideal victims, positioning migrant populations as an existential threat and setting the stage for the emergence of moral panics.

And this ‘tip of the iceberg’, this ‘evil before something must be done’ has traditionally tended to be criminal in nature, either because panic is based on fear of certain behaviours which are already considered criminal, or because the social response to the phenomenon

is accompanied by calls for criminalisation (Cohen, 1972). A relatively recent example of these processes can be found in the panic related to sexual violence by migrants that was triggered in Germany in 2016 after a series of allegations of sexual assault during the 2015 New Year's Eve celebration in Köln (Kosnick, 2019; Giuliani et al., 2020). Beyond this example, these two planes of criminality and migration have overlapped on multiple occasions, resulting in crime becoming a key element in the construction of moral panics surrounding migrants (Fitzgerald & Smoczyński, 2021). Most people do not experience crime first-hand, but relate to it through the media, which becomes a particularly powerful agent in discourses surrounding crime and justice and making it highly relevant to the process of constructing moral panics. However, the media has traditionally needed 'something else' to initiate a panic process.

One criterion for assessing the existence of a moral panic is that the initial media attention and social outrage is apparently exaggerated and irrational compared to the harm that is actually caused (Cohen, 1972; Goode & Ben-Yehuda, 1994). They draw their strength and function from social anxieties and tensions (Young, 2009), so it is not necessary for a social phenomenon to be truly harmful, damaging or of special criminological interest to trigger real panics among the population. This disproportionate reaction often stems from latent social anxieties, which the media exploits to construct and disseminate exaggerated representations of reality. Hall et al. (1978) demonstrated how this process is embedded in broader social and political dynamics, where moral panics function as tools for managing societal tensions, redirecting public attention, and legitimising repressive measures.

As Critcher (2006) observed, the success of a moral panic often reflects the degree of underlying social anxiety rather than any objective evidence of harm. It is the media and its ability to create and disseminate its own representations of reality the one who creates panics and triggers disproportionate social reactions, which, if embedded in broader social and political dynamics, can end up becoming part of culture wars in which the consensus around 'panic' is replaced by a conflict between different political positions (Garland, 2008). When it comes to their traditional conception, however, moral panics require, as we have seen, a 'tip of the iceberg', a certain 'straw that breaks the camel's back' like a fact or an event, in other words, something from which the media can begin to construct narratives that create, or magnify, certain social anxieties. Of course, the work of the media and other actors could lead to that event being distorted or exaggerated to the point where it played only a small role in the panic, but at least there was some "temporal" dependency, meaning the panic occurred as a temporal consequence of a real event.

Consequently, and to synthesize what has been observed, we can identify two relevant elements when analysing the construction of moral panics around migration: on the one hand, the association between migration and certain stigmatising discourses, among which there is a prevalence of those related to crime; and, on the other hand, the need for some kind of 'event' or 'case' that allows the media to initiate the process of constructing moral panic. These two elements are uncontroversial, stem from the original conceptualisation of moral panic and are present, more or less explicitly, in all approaches to moral panics and, consequently, to the connection between migration and the media, over the last half-century.

However, It is worth asking whether this is still the case today, not only because something in the very functioning of the construction of moral panics has changed, but also because perhaps the agent that created and disseminated them has changed too. The transition to digital media could have altered the dynamics of moral panic production, brought new logics and reshaped how social anxieties are disseminated (Hier, 2019). This transformation has decentralized media production, allowing new actors such as influencers and

algorithms to play prominent roles in our communicative ecosystem, and perhaps also in the construction of moral panics (Ingraham & Reeves, 2016; Walsh, 2020).

These transformations surrounding the media and their context have been so far-reaching, in fact, that it is worth asking whether there have also been changes in the way in which moral panics are constructed around migration. Of course, analyzing all the changes would be an enormous task and beyond our scope. However, in this article, we will focus on two changes that are not so much related to the process of panic diffusion, but rather to panic itself—specifically, its content and its temporality.

Moreover, these transformations do not occur in a political vacuum. In the context of rising populism and anti-immigration rhetoric across Europe during the 2020 s, migration has become a central axis in broader political struggles. In countries like Spain, this instrumentalization of migration aligns with wider narratives of cultural threat and national identity, which are actively promoted by both mainstream and fringe political actors (Gómez-Quintero et al., 2021). This socio-political backdrop is crucial for understanding why certain disinformation tropes resonate and gain traction online.

Method

Considering the transformations that the digitalization of public communication has brought about and their potential impact on the processes involved in generating moral panics related to migration, this article seeks to explore two specific dimensions of this phenomenon: the temporal distribution of false content concerning migration and the substantive nature of such false information. Thus; taking as its basis, the misinformation surrounding migration in Spain, this study will examine possible changes regarding two central elements in the traditional formulation of moral panics. First, the presumed need for a real-world event to act as a trigger for the panic, which would typically result in the temporal distribution of hoaxes aligning with specific external developments (Hypothesis 1). As previously discussed, this requirement has been increasingly challenged in modern formulations of moral panics in the digital context. Second, we will investigate the continued centrality of crime in the content of the hoaxes recorded (Hypothesis 2), an issue that, while central to classical theory, has received surprisingly little empirical attention and therefore merits further analysis. To address these questions, we conducted an analysis using the database of migration-related hoaxes compiled by the fact-checking organization Maldita.

The formulation of these two hypotheses directly responds to key critiques raised in recent literature on moral panics. Hypothesis 1 engages with the growing body of work that questions whether a moral panic still requires a concrete, real-world incident to act as a catalyst—especially in online contexts where narratives often emerge from distorted or entirely fabricated content (Zielińska & Pasamonik, 2021). Hypothesis 2 addresses the often-implicit assumption that crime remains the dominant narrative in the construction of moral panics. By empirically testing these two dimensions, we aim to interrogate the continued relevance of classical moral panic theory in a media environment marked by digital logic, platformization, and affective polarisation.

To address these questions, we have conducted an analysis using the database of migration-related hoaxes compiled by the fact-checking organization Maldita. Maldita is a fact-checking entity that initiated its activities in 2018 and has, since 2021, systematically constructed a database listing all the hoaxes it has been able to identify. This database has

been enriched via the organization's various social media channels, designed to enable citizens to submit information suspected to be false. Among these, the WhatsApp chatbot is particularly noteworthy, since it accounts for 74% of the hoaxes contained in the database since it was first implemented in 2020. This tool allows citizens to send a WhatsApp message to Maldita, providing information they consider suspicious, and receive an automatic response based on the information available to the agency.

Regardless of the channel through which a potential hoax is received, each submission is initially reviewed by a fact-checker, who registers it and determines whether the information in question has already been verified or refuted by the organization, or if it constitutes a new claim that requires investigation. In either scenario, the information is systematically logged and assigned a unique identifier if it is novel or a shared identifier if the same potential hoax has previously been submitted. Following this preliminary registration, the fact-checkers proceed to verify the information, designating it as a "hoax" whenever they deem it appropriate. Maldita defines hoaxes as instances of misinformation that have been independently confirmed as false yet are disseminated as genuine, encompassing data, facts, images, videos, audio, or satirical content circulated as if it were authentic (Maldita, 2024). Through this methodology, Maldita has developed a comprehensive database comprising both the hoaxes the organization has debunked and all the instances in which these hoaxes have been submitted for verification.

For the purposes of this study, Maldita provided the researchers with access to hoaxes classified under the category of "Migration" in their database, encompassing records from the years 2021 and 2022. This access enabled the researchers to analyze a dataset comprising 31,894 entries recorded between January 1, 2021, and December 31, 2022, with each entry corresponding to a hoax submitted to the organization by members of the public. Based on this dataset, two distinct analyses were conducted, aligned with the central research questions of this article, which, in turn, seek to empirically test two previously formulated hypotheses. Accordingly, the first hypothesis postulates that the temporal distribution of migration-related hoaxes will not exhibit a regular pattern, aligning with external events instead; meanwhile, the second hypothesis suggests that crime will be the predominant theme of the migration-related hoaxes throughout the database. To test the first hypothesis, we examined the temporal distribution of the hoaxes using a descriptive time-series analysis, which assessed both the seasonality of the series (Shumway & Stoffer, 2017) and the smoothed trend through the construction of a Locally Estimated Scatterplot Smoothing (LOESS) model, all of which facilitated the visual analysis of trends over time. Furthermore, this analysis was supplemented with a review of migration-related news articles published by the Spanish newspaper *El Mundo* during the same span of time. By querying *El Mundo*'s¹ digital archive using the term "migration," several relevant articles were identified for the years 2021 and 2022. The temporal distribution of these articles was analyzed to identify periods of heightened concentration, then the content of the articles corresponding to these periods was explored in further detail. Additionally, we analyzed the temporal distribution of the records for the most recurrent hoaxes in the database—defined as the instances in which specific hoaxes were repeatedly submitted to the fact-checkers.

¹ *El Mundo* is the most visited general-interest newspaper in Spain according to the ComScore agency: *EL MUNDO* once again leads Comscore as the most-read newspaper in these other measurements—#RedDePeriodistas.

To test the second hypothesis, we scrutinized the content of the hoaxes in the database through a dual framework: categorizing the false attributions while identifying recurring tropes. The classification of hoaxes by attribution was developed specifically for this study, aiming to categorize the nature of the false claims by focusing on the specific elements falsely attributed to them. Four overarching categories of attribution were identified: attribution of demands, attribution of support, attribution of privileges, and attribution of crimes. The crime category was further subdivided into three types: sexual crime, violent crime, and economic crime. The analysis of certain tropes served as a complementary approach, providing insights into recurring themes within the hoaxes themselves. The tropes identified included social benefits, preferential treatment, and crime, with the latter being further subdivided into sexual, violent, and economic crime. Both the attribution-based classification and the identification of tropes were developed inductively during the iterative review of the hoaxes. As they emerged, new categories and tropes were added until we reached thematic saturation, ensuring that the dataset fully captured the diversity of the hoaxes analyzed.

Temporal Patterns

As noted, the database compiled by Maldita contains 31,894 entries recorded between January 1, 2021, and December 31, 2022. We will refer to this total as "total hoaxes." However, these entries correspond to 81 distinct pieces of information, which we will designate as "distinct hoaxes." Each of the "records" of a false piece of information cannot, in itself, be considered a "hoax," or an independent disinformation event. However, each record—each instance in which a citizen submits information to the fact-checkers—represents a situation relatively close to a disinformation event, as every verification request implies that at least one citizen has encountered the false information. It is therefore relevant to examine the temporal evolution of both the records of distinct hoaxes and the total number of entries in the database.

As shown in Fig. 1, the daily number of hoaxes recorded is not regular, nor is the number of distinct hoaxes recorded per day. Additionally, the decomposition of these time series reveals the absence of a clear trend in either direction or any relevant seasonal variation.² In fact, in both time series, the Augmented Dickey-Fuller Test (distinct hoaxes: Dickey-Fuller = -5.64, p-value < 0.01; total hoaxes: Dickey-Fuller = -7.12, p-value < 0.01) allows us to reject the null hypothesis and infer that these are stationary time series.

Consequently, the recording of hoaxes in our database does not appear to be influenced by specific work rhythms of the fact-checkers—which would manifest as clear weekly patterns—nor by a growing popularity of the verification service, which would be reflected in an upward trend. Therefore, we can work with the data without requiring adjustments and conclude that the observed variations in the data originate outside the processes of data construction and beyond the time series themselves.

Given the complexity of the data, its apparent randomness, and significant variability, a model was constructed using "Locally Estimated Scatterplot Smoothing" (LOESS) with a

² On certain days of the week—particularly Saturdays, Sundays, Mondays, and Tuesdays—a noticeably lower average number of hoaxes is recorded. However, this variation is minimal, and the data exhibits significant dispersion, suggesting the absence of any meaningful seasonality.

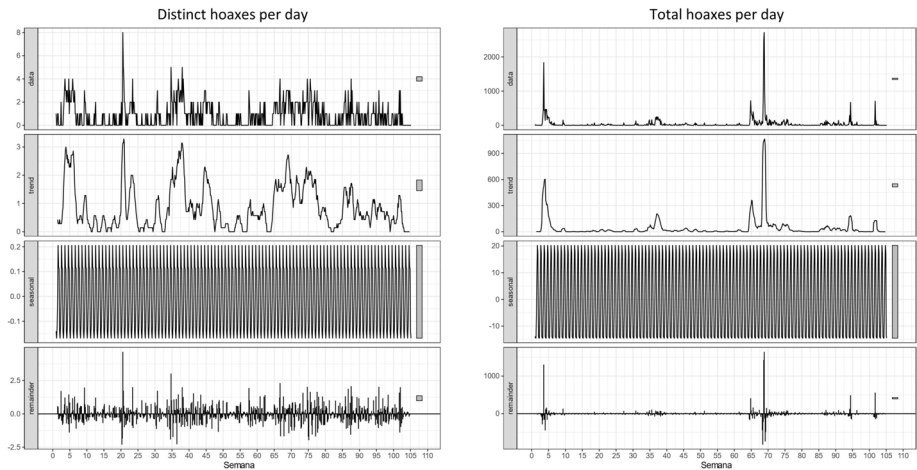


Fig. 1 Time series decomposition

span of 0.05.³ This approach smooths the fluctuations in both trends, allowing us to identify several relevant features in the two-time series.

Firstly, as shown in Fig. 2, both trends appear to oscillate, forming well-defined peaks that rarely correspond to isolated days. In other words, days with an exceptionally high number of recorded hoaxes—whether considering only distinct hoaxes or the total—tend to be preceded or followed by days with similarly elevated numbers, which suggests that disinformation may occur in waves that extend over several days.

Taking the daily evolution of distinct hoaxes as a reference, we can visually identify six waves (Fig. 3), which can be conceptualized as periods in which the values of the smoothed trend exceed the mean value—in this case, greater than 0.855. Following this criterion, the first wave begins around January 11 and extends until February 16, peaking on January 28; the second wave spans from May 10 to June 14, with its peak on May 23; the third wave runs from August 19 to October 4, with its crest on September 11; the fourth wave starts on October 21 and lasts until November 19, peaking on November 6; in 2022, the fifth wave begins on March 23 and continues until June 28, with peaks on April 21 and June 4; and finally, the sixth wave occurs between August 13 and September 9, peaking on August 23. However, these waves are not only visible when observing the distinct hoaxes recorded each day, they are also present in the evolution of total hoaxes. In fact, as shown in Fig. 3, the waves in the evolution of total hoaxes—also defined as periods in which the smoothed trend exceeds the mean—partially coincide with the waves in the smoothed trend of daily hoaxes.

Despite being present in the actual values as well, these dynamics are being observed, as might be expected, using as a reference the values of the smoothed trend generated by the created model, (Table 1). During the six identified waves, daily values for distinct hoaxes exceed the average. Moreover, despite having used distinct hoaxes as the reference for identifying the waves, as previously noted, these waves are also reflected in the total

³ The value of this hyperparameter was determined through machine learning, selecting the value that minimized the Root Mean Square Error (RMSE) relative to the actual data for the model.

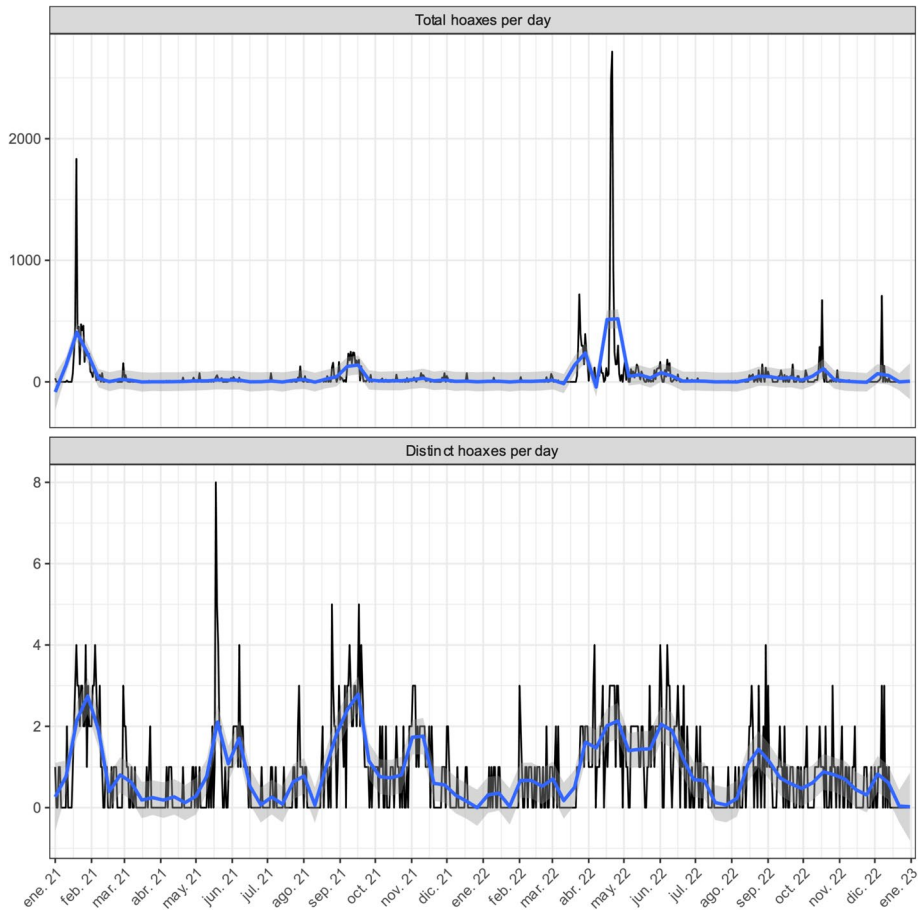


Fig. 2 Hoaxes time series and smoothed tendency

hoaxes recorded daily. During the first, third, and fifth waves, total hoaxes reached values significantly above average, even peaking at more than 2,000 hoaxes received in a single day. Indeed, both the daily number of distinct hoaxes and the total number of hoaxes tend to vary in tandem, with the two variables being notably correlated ($\rho^4 = 0.94$, $p\text{-value} < 0.01$). Therefore, it does not seem that the waves can be attributed exclusively to the exceptional prevalence of a single hoax.

These waves, irregularly distributed over time, allow us to assert that disinformation does not appear to follow any regular pattern, just like analyzing the pace of migration-related news does not reveal the existence of external events that condition temporal variability.

Furthermore, the temporal distribution of migration-related news published by *El Mundo* shows little correlation with the distribution of hoaxes, whether considering total

⁴ Given the lack of normality in both variables, the association between them was measured using the Spearman correlation coefficient.

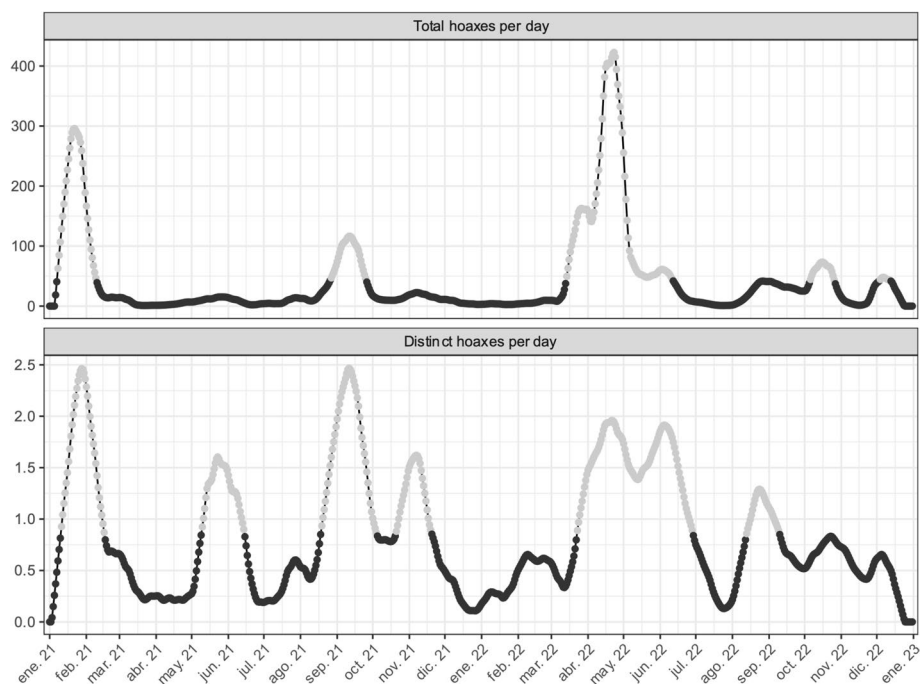


Fig. 3 Hoaxes smoothed time series

Table 1 Hoax per wave

Wave	Duration (Estimated)	Total Daily Hoaxes			Distinct Daily Hoaxes		
		mean	median	maximum	mean	median	maximum
1 st	11/01/21—16/02/21	181.0	72	1834	1.8	2.0	4.0
2nd	10/05/21—14/06/21	12.7	8	55	1.5	1.0	8.0
3rd	19/08/21—04/10/21	67.2	24	248	1.8	2.0	5.0
4 th	21/10/21—19/11/21	17.7	11.5	73	1.4	1.5	3.0
5 th	23/03/22—28/06/22	151.0	52.5	2716	1.6	2.0	4.0
6 th	13/08/22—09/09/22	34.4	24	144	1.1	1.0	4.0

hoaxes ($\rho^5 = 0$, $p\text{-value} < 0.05$) or distinct hoaxes received daily ($\rho = 0.94$, $p\text{-value} < 0.01$). While there is indeed a statistically significant correlation, it is rather weak. A visual observation of the evolution of migration-related news and its comparison with the hoax series confirms this weak correlation, as shown by the waves of distinct hoaxes and the values of the smoothed time series (for which we also used a LOESS model) above it only partially coinciding.

⁵ Again, given the lack of normality in both variables, the association between them was measured using the Spearman correlation coefficient.

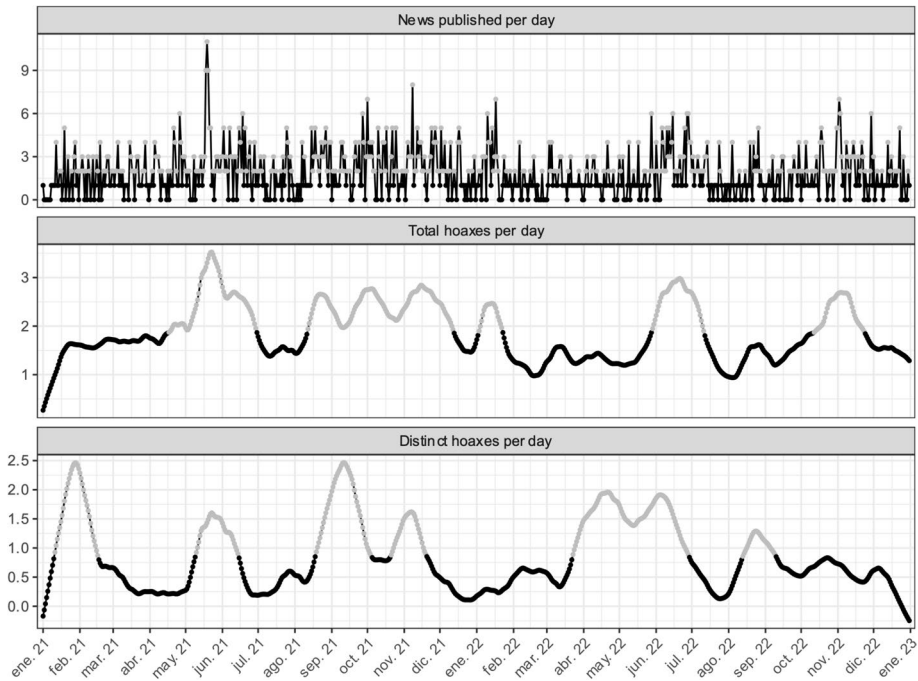


Fig. 4 Hoaxes smoothed time series and news published by “El Mundo” per day

For instance, the second wave of hoaxes seems to coincide with a peak in migration-related news. The third wave also aligns with a few months where news on the topic exceeds the average, and the second half of the fifth wave overlaps with another peak in news coverage. In the second wave, we observed a notable presence of news related to the migration crisis in Ceuta and Melilla. This crisis was described as a situation where waves of immigrants attempted to enter Melilla, accompanied by tragedies at sea involving unstable boats reaching the coast. News also covered the tense international political relationships between Spain and Morocco, as well as the Spanish government’s responses to migration policies.

Among the themes identified in hoaxes during this same period there’s a prevalence of the attribution of false crimes to immigrants. However, no news about crimes committed by immigrants was found during these dates.

In contrast, during the third and fifth waves, we observed a high prevalence of news on migration, humanitarian crises, and international politics, however, unlike in the previous case, no particular event stands out over the rest. During the fifth wave, several news articles referenced the one-year anniversary of the migration crisis between Morocco and Spain, a phenomenon that dates back to the second wave.

Despite the absence of news about crimes committed by migrants, among the themes of the hoaxes during these periods, the attribution of crimes to immigrants stands out once again. This could suggest that peaks in disinformation may be more closely related to the repetition and amplification of existing narratives rather than to recent newsworthy events (Fig. 4).

Similarly, if we take as a reference the seven hoaxes with the greatest impact (Fig. 5)—these seven hoaxes account for 80% of all records, with the content of each hoax detailed

in Fig. 5—it becomes evident that, with the exception of two cases, their incidence is not confined to a single period. Rather, they follow irregular patterns, appearing and disappearing with varying intensity.

For instance, the seventh most repeated hoax first appeared in January 2021, reemerged in June of the same year, although only for a single day, and did not resurface until September. From that point on, it gained significant traction during October and November. In December, it disappeared again, but it returned in January 2022 and continued to appear repeatedly throughout the first half of the year. Thus, it is clear that the observed waves are not exclusively caused by the emergence of a new hoax. Instead, these hoaxes appear and disappear intermittently, assuming varying levels of prominence across different waves.

Content

As previously noted, the database contains 31,894 entries corresponding to 81 distinct hoaxes. In other words, during the reference period, 81 distinct hoaxes were identified, collectively reported to fact-checkers 31,894 times. Among these 81 distinct hoaxes, the category that generated the highest number of hoaxes was the attribution of crimes ($n = 35$) (Table 2), followed by the attribution of false support and the attribution of privileges, with the attribution of demands trailing far behind.

Thus, nearly half of the false stories about immigrants are built around the attribution of false crimes to this group, with violent crimes being the most prominent within this

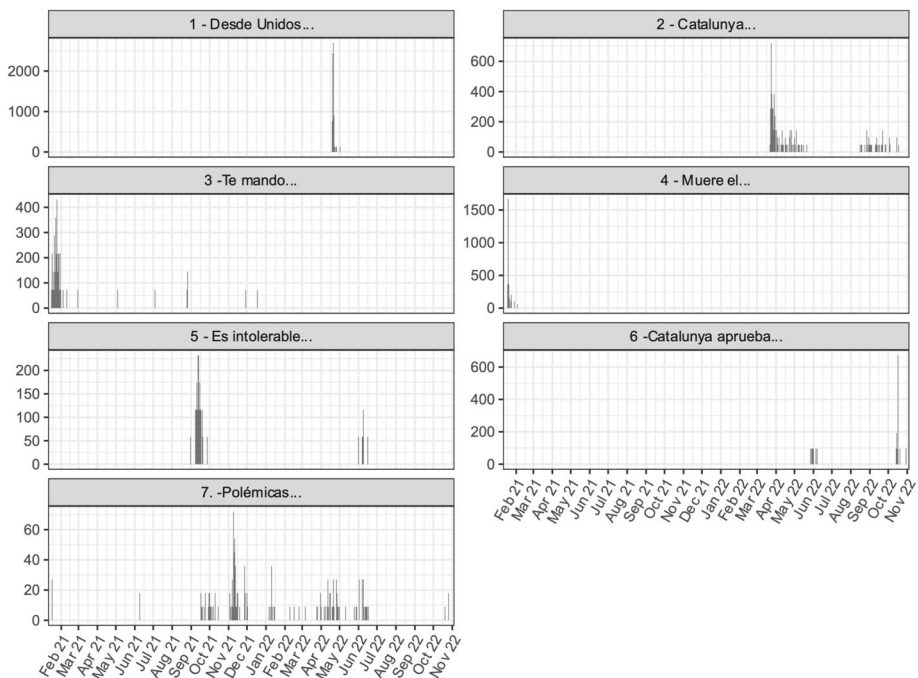


Fig. 5 Seven main hoaxes time distribution

Table 2 Registered Hoaxes

Category	Total Hoaxes		Distinct Hoaxes	
	n	%	n	%
Attribution of Crimes	9846	30.9	35	43.2
- Sexual Crime	2172	22.1	6	16.7
- Violent Crime	7563	76.8	24	66.7
- Economic Crime	111	1.1	5	13.4
Attribution of Demands	131	0.4	3	3.7
Attribution of Support	17,913	56.2	17	21
Attribution of Privileges	3608	11.3	17	21
Others	396	1.2	9	11.1
Total	31,894		81	

Table 3 Tropes of Hoaxes

Tropes	Total Hoaxes		Distinct Hoaxes	
	n	%	n	%
Social Benefits	4089	12.8	19	23.5
Privileged Treatment	25424	79.6	41	50.6
Crime	9847	30.9	36	44.4
- Sexual Crime	2183	22.2	8	22.2
- Violent Crime	7563	76.8	24	66.7
- Economic Crime	127	12.9	7	19.4

category, representing two-thirds of the hoaxes based on the attribution of crimes. However, the recurrence—and therefore the prevalence—of all hoaxes is not even. Considering all the entries in our database, the most prevalent category is the attribution of false support, as each piece of information in this category was recorded an average of 1,054 times. Consequently, this category represents 56% of the total hoaxes.

However, even though a hoax may have a central theme, it can reference various tropes associated with migration. As we have seen, it may simultaneously refer to the social benefits received by the migrant population while also falsely attributing crimes to them. The most common trope, present in more than 50% of the distinct hoaxes, is the alleged privilege of the migrant population. Additionally, hoaxes discussing this supposed inequality seem to be shared more widely, as this trope is present in nearly 80% of all records.

Following the appeal to privileges, crime ranks second, appearing in 44.4% of the distinct hoaxes. Lastly, the trope concerning the social benefits supposedly received by the migrant population is the least represented (Table 3).

The significant prevalence of the appeal to privilege is also evident in the fact that this trope appears in five of the seven hoaxes with the highest prevalence, which account for 80% of all entries in the database combined. However, the reference to privilege is not the only prominent trope within the most recurrent hoaxes, as four of them also refer to crime, with two specifically mentioning crimes of a sexual nature.

Nevertheless, the most common central theme among these seven hoaxes is the attribution of false support. Consequently, within these seven most recurrent hoaxes, we observe

how different tropes combine into false information that is further used to attack specific individuals or political parties by attributing false statements to them.

The most recurrent hoax consists of an image showing a tweet that reads: "From Unidos Podemos, we apologize to all Muslim men and women offended by the public spaces used for the Holy Week processions. #RamadanMubarak." Fact-checkers confirmed that the account posting the tweet is a troll account unrelated to the political party Podemos, which frequently posts tweets falsely attributing controversial statements or actions to the left-wing party.

The second most frequently recorded hoax is a doctored image showing a banner of support for Ukraine placed by the Catalan Government at its headquarters, altered to include the text in Catalan: "Welcome Ukrainians, Andalusians and Extremadurans out." Similarly, the fifth most prevalent hoax involves an image with a fake tweet falsely attributed to journalist Elisa Beni. The seventh most shared hoax is another fake tweet, this time attributed to the newspaper *El Mundo*, suggesting that the outlet reported a statement from an advisor to Irene Montero (former Minister of Equality), who allegedly advocated granting citizenship to all migrants to "prevent racism caused by news about rapes by foreigners."

Crime emerges as the second most common trope, followed by the alleged privilege that the migrant population enjoys. Consequently, Hypothesis 2 can be considered valid, as crime indeed plays a significant role in the hoaxes recorded about migration. However, it is worth noting that crime does not take a leading role, instead being somewhat overshadowed by the embedding of disinformation within what appears to be a politically charged landscape (Fig. 6).

Discussion

Exploring the records in the database of migration-related hoaxes allows us to assert: first, that the number of false pieces of information about migration circulating on social media is highly significant, although extremely limited in variety. Over three years, only 81 distinct hoaxes were recorded, yet these hoaxes were reported a total of 31,894 times. Considering the process used to record hoaxes and the fact that the time series do not appear to be influenced by the fact-checkers' work rhythms, this demonstrates not only the efficiency of the fact-checkers in capturing such content on social media but also how the same content is reproduced repeatedly over time as if it were distinct events. In fact, 80% of the records correspond to just 20% of the hoaxes, reflecting a significant disparity between the number of times the most viral hoaxes are recorded and the majority of hoaxes.

The observation of the time series created from these hoax records confirms that the same content resurfaces and fades away repeatedly over time. It could be suggested, therefore, that a distinguishing characteristic of disinformation on social media, as opposed to traditional media, is that while it is also built around a small number of narratives, the digital structure of the networks in which it is distributed allows it to reach significant volumes, multiplying much further despite being the same content.

The temporal evolution of all the hoaxes further reveals that disinformation tends to form certain waves—periods lasting several weeks during which false information circulates in higher volumes. Moreover, a closer examination shows that these waves are not exclusively the result of exceptional virality of a single hoax; instead, they tend to combine multiple hoaxes. The causes of this irregular temporal pattern are difficult to determine:

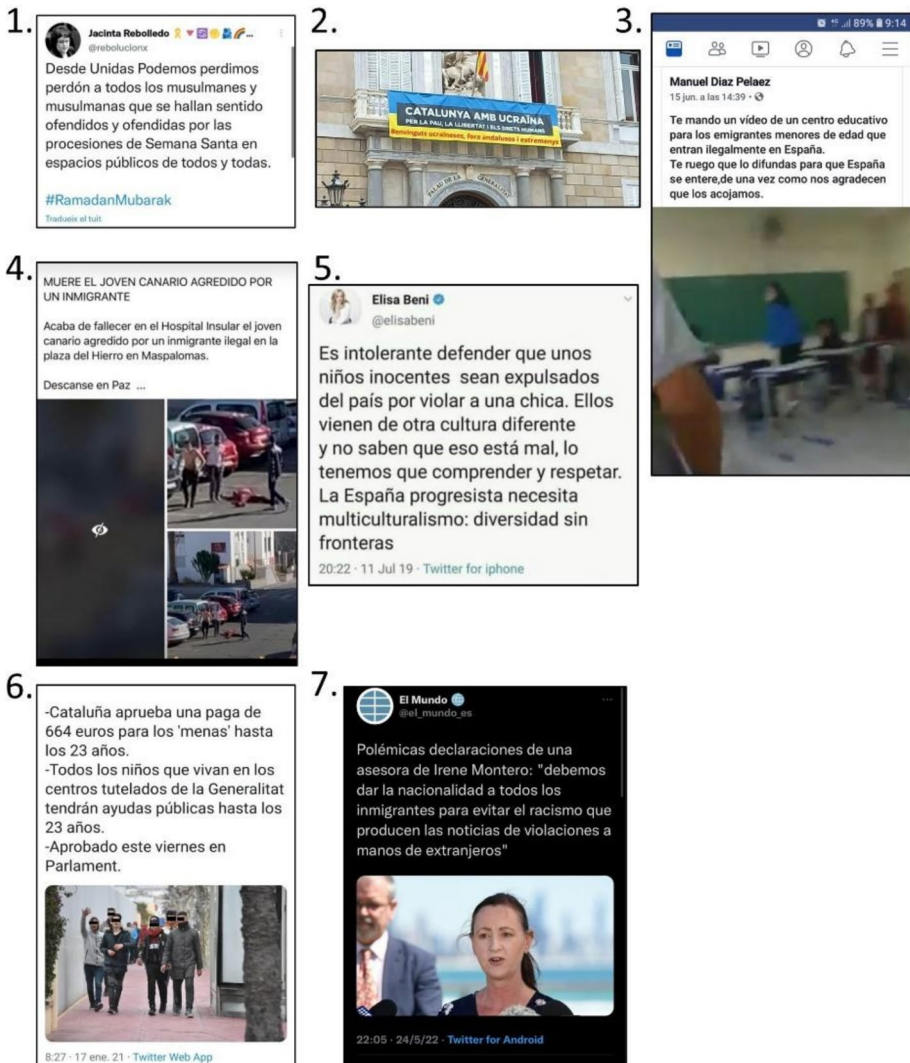


Fig. 6 Main fake (Translations: 1. Jacinta Rebolledo's fabricated tweet: "From Unidas Podemos we apologise to all Muslims who have felt offended by the Holy Week processions in public spaces belonging to everyone."; 2. Manipulated town hall banner: Edited image of a town hall banner reading: "Catalonia with Ukraine for peace, freedom and human rights. Welcome Ukrainians, out Andalusians and Extremadurians."; 3. Fabricated Facebook post by Manuel Díaz: "I am sending you a video of an educational centre for underage migrants who enter Spain illegally. I ask you to spread it so that Spain knows, once and for all, how grateful we are to welcome them."; 4. Misleading tweet: The text of the post falsely states: "Young Canarian assaulted by immigrant dies. The young Canarian who was assaulted by an illegal immigrant in the Plaza de Hierro in Maspalomas has just died in the Insular hospital. May he rest in peace..."; 5. Fabricated tweet attributed to Elisa Beni: Falsely attributed to a Spanish journalist, this tweet reads: "It is intolerant to defend innocent children being expelled from the country for raping a girl. They come from a different culture, and they don't know that this is wrong, we have to understand and respect that. Progressive Spain needs multiculturalism: diversity without frontiers."; 6. Misleading tweet about allowances in Catalonia: "- Catalonia approves an allowance of up to 664 euros for 'menas' [unaccompanied foreign minors] up to the age of 23.—All children living in the Generalitat de Catalunya will have public benefits until the age of 23.—Approved this Friday in the Parliament."; 7. Fabricated tweet published by El Mundo: "Controversial statements by an adviser to Irene Montero: we must give nationality to all immigrants to avoid the racism produced by reports of rape by foreigners.")

Are these organized campaigns? Or is there a cascading effect in which one hoax amplifies others? While we cannot answer the question of what drives this temporal pattern, we were able to observe that it does not align with external events that also impact mainstream media, at least not clearly.

Thus, Hypothesis 1 must be partially rejected, as disinformation does appear to follow a certain pattern, albeit an irregular one; however, we found no solid evidence linking its flows to external events. This latter point is particularly interesting, as moral panics have traditionally required some "tipping point"—a more or less real element to justify the panic's emergence. However, the lack of connection to external events and the high recurrence of a small number of hoaxes suggest that today no such trigger is necessary, at least in temporal terms. Instead, the repeated circulation of the same narratives over time suffices, allowing some to go viral, either by generating a wave or capitalizing on one. In the current communicative ecosystem, this "tipping point" does not even need to be real; it can be entirely fake—a phenomenon that only exists "digitally." We do not have data on the origin of the hoaxes; however, their repeated appearance over time aligns with arguments suggesting that, in the digital communicative ecosystem, moral panics do not depend so much on particular campaigns in the media but rather have a more decentralized nature (Ingraham & Reeves, 2016) and are more strongly associated with multiple actions carried out by smaller actors.

Turning to Hypothesis 2, crime continues to play an important role in disinformation about migration. We observed how it is still used to generate moral panics that frame the migrant population as "folk devils." These narratives appear aimed at inciting fear, perpetuating stigma, and reinforcing social divisions. As such, they constitute a core mechanism in the construction of moral panics, still embedded—at least partially—in broader ideological processes (Hall et al., 1978). However, our hypothesis regarding the predominance of crime had to be rejected: while crime remains present in many disinformation narratives, it appears to play a somewhat secondary role in the current digital environment. Among the most recurrent hoaxes, we found a significant number of false messages whose central theme was not the behaviour of migrants per se, but the attribution of fabricated statements, decisions, or political positions in support of migration to political parties, their representatives, or journalists.

This points to a shift in the construction of disinformation-based panics, one that seems more oriented toward generating moral condemnation not primarily of the supposed deviant group, but of those who are allegedly complicit with or tolerant of it. Many of these hoaxes still rely on tropes linking migrants to crime, particularly sexual violence, but the core focus lies in discrediting those actors who are framed as enabling or defending such threats. This suggests—though further research is needed to confirm it—that the main goal of many of these hoaxes is to provoke rejection, not so much of the migrant population itself, but of political or media figures associated with pro-migration stances. In this sense, disinformation operates not only through the construction of deviant others, but also through the attribution of moral failure to one's political adversaries. It could even be argued that contemporary moral panics—or at least attempts to generate them—are less about "what the other does" and more about "what the political opponent allegedly supports." The panic no longer stems solely from deviant acts, but from the perception that certain sectors of society tolerate or even promote those acts.

These findings align with recent literature on the affordances and incentives of digital platforms, which stress how algorithmic logics prioritise engagement, emotional intensity and virality over truth (Freelon & Wells, 2020; González-Bailón & Lelkes, 2022). In this communicative environment, repetition, visibility and outrage become more decisive than

factual accuracy. Rather than moral panics being generated exclusively through traditional agenda-setting mechanisms, they now emerge from hybrid dynamics in which political actors, media logics and polarised audiences interact. Importantly, this does not imply the disappearance of elite influence: political actors continue to play a central role—not only as instigators of narratives, but also as symbolic battlegrounds in struggles over identity, legitimacy, and national belonging. Disinformation, therefore, becomes not just a matter of content or misinformation, but of political strategy and media materiality.

Thus, migration-related disinformation appears to be embedded in the realm of direct political contention, becoming a weapon that instrumentalizes the migrant population and leverages certain tropes to shape perceptions of migration. It seems, albeit hypothetically, that migration-related disinformation may be part of a broader cultural war, pitting opposing views on migration against each other. Polarization, consequently, seems to be a phenomenon closely tied to the processes of generating moral panics in the current digital ecosystem. Of course, the attribution of false support is not the only theme of migration-related disinformation. Tropes about sexual violence and the attribution of criminal behaviours—especially violent crimes—are the most common themes among the recorded hoaxes. It could even be argued, though further research is necessary for a deeper analysis, that contemporary moral panics—or at least attempts to generate them—are less about "what the other does" and more about "what the political opponent supports." The core focus is not solely on attributing reprehensible actions but also on attributing support for those actions. While disinformation still relies on "a fact"—something that supposedly happened and often relates to crime—its primary function appears to be the use of that disinformation for partisan conflict. This takes place in a digital environment where disinformation consumers appear to be highly polarized and ideologically biased (González-Bailón et al., 2023).

Conclusion

In conclusion, it is important to first note that exploring migration-related disinformation on social media reveals a landscape characterized by high repetition and limited thematic variety. This suggests that digital platforms repeatedly amplify a small set of narratives over time, often independently from external events. While crime-related narratives remain significant, the primary focus appears to have shifted toward attributing fabricated statements or positions to political and media figures, portraying them as morally complicit with the perceived threats posed by migrants. This shift highlights a key dynamic in contemporary moral panics: the emphasis is no longer solely on the deviant acts themselves, but increasingly on political adversaries accused of tolerating or endorsing such acts. Furthermore, the nature of digital communication distorts the temporal relationship between specific events and hoaxes, allowing false information to be recycled and resurface at different points in time.

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Declarations

Competing Interests The authors declare that they have no competing interests.

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