

Dr. Julen ORBEGOZO-TERRADILLOS

Universidad del País Vasco. Spain. julen.orbegozo@ehu.eus

Dr. Jordi MORALES-I-GRAS

Universidad del País Vasco. Spain. jordi.morales@ehu.eus

Dr. Ainara LARRONDO-URETA

Universidad del País Vasco. Spain. ainara.larrondo@ehu.eus

Misinformation in social networks: closed or dialectical spaces? The case for Luther King, Quim Torra and El Confidencial

Desinformación en redes sociales: ¿compartimentos estancos o espacios dialécticos? El caso Luther King, Quim Torra y El Confidencial

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Abstract

This paper examines the dissemination of disinformation published on the online newspaper El Confidencial framed within a politically polarised context, then analyses its development on a virtual discussion on Twitter. The selected news item deals with some words spoken by the president of the Government of Catalonia (Spain), Quim Torra, in one of his official speeches, as well as the feedback proposed by the Institute created in honour of the civil rights activist, Martin Luther King. The research sought to study the influence of the ideologically-mediated virtual encounters when exposed to certain information. The case study employs techniques for the analysis of big data in social media based on the tool Twitter Capture and Analysis Toolset (DMI-TCAT), and applies the Louvain Multinivell algorithm. This method reveals how misinformation and subsequent corrections are unequally disseminated throughout a highly politicised network, in which different groups of users are exposed to different information. 27,648 actors and 76,815 connections were analysed. In addition, the utility of the Social Network and the Big Data Analysis in the detection of dissemination of fake news and its possible mitigation are discussed.

Keywords

Fake news; disinformation; journalism; big data; social networks; Twitter

Resumen

Este artículo examina la difusión de una desinformación publicada por el diario digital El Confidencial en un contexto políticamente polarizado y analiza su comportamiento en la conversación digital en Twitter. La noticia seleccionada relaciona unas palabras pronunciadas por el presidente de la Generalitat de Cataluña, Quim Torra, en uno de sus discursos oficiales, y la respuesta del instituto creado en honor al activista por los derechos civiles Luther King. Esta investigación tiene como objetivo estudiar la influencia de las relaciones virtuales ideológicamente mediadas a la hora de determinar la exposición a determinada información. El estudio empírico aplica técnicas de análisis de datos masivos en redes sociales, capturados y elaborados a partir de la herramienta Twitter Capture and Analysis Toolset (DMI-TCAT) y aplicando el algoritmo Louvain Multinivell. Se consigue así conocer cómo la información incorrecta y las correcciones posteriores se difunden de manera desigual en una red altamente politizada, en la que diferentes grupos de usuarios están expuestos a diferente información. Se analizan 27.648 actores y 76.815 conexiones. Además, se discute la utilidad de la Red Social y el Análisis de Big Data en la detección de propagación de noticias falsas y su eventual mitigación.

Palabras clave

Fake news; desinformación; periodismo; big data; redes sociales; Twitter

1. Introduction

1.1. Fake news, disinformation and post-truth

Fake news and the spread of distorted information is not new, although in today's world they represent one of the main problems of the digital era (Palomo and Sedano, 2018) and threaten to affect public discourse and democratic decision-making (Stewart et al., 2019). The 2016 presidential elections in the United States and the Brexit process in the United Kingdom, among other events of global scope, have boosted the study of this phenomenon from complementary perspectives, including sociology, psychology, political science and communication.

After the elections whose outcome was the Donald Trump presidency in the United States, studies such as that by Bovet and Makse (2019) or the one by Silverman, Strapagiel, Shaban and Hall (2016) have revealed surprising and worrying data, including that 25% of tweets sent during the US elections contained false or extremely partisan information (Bovet and Makse, 2019) or that false news is accepted to a greater extent and has a greater capacity for going viral among the public than real news (Silverman, Strapagiel, Shaban and Hall, 2016). In fact, another study by the Massachusetts Institute of Technology (MIT) ascertains that fake news is 70% more likely to be shared on Twitter than true news, and is spread by real people rather than bots (Dizikes, 2018).

The scientific and social discussion surrounding the phenomenon of fake news and its consequences in our society motivated the Oxford English Dictionary –considered to be the most learned and complete dictionary in the English language– to declare “fake news” to be its word of the year in 2017, just a year after it gave this honour to the term “post-truth”. Actually, both matters are closely related, since fake news refers to the material element that is so much a part of the political and social context referred to by the philosophical term, post-truth.

In fact the post-truth phenomenon is one of the great subjects for study and one of the major challenges for today's society. The problem of fake news, disinformation, hoaxes and biased content –which we place in the same context– is, according to Aparici and García-Marín (2019), especially sensitive when it takes place within the coordinates of political institutions and media organizations.

Thus, Murolo (2019) defines a post-truth as an idea or a set of images, social representations or meaning –already incorporated by audiences– and from which arise possible fake news, which refers to this idea, affirming it and amplifying it. Post-news is closely related to the decline of the traditional media and the rise of “hyperpartisan false digital media” (Aparici and García-Marín, 2019). It is also closely linked to the trail we leave on the Web and the data that can be obtained from our interactions on the Internet, as well as with the importance of the cognitive biases that we humans have.

In recent years, then, definitions of the fake news phenomenon have proliferated and significant progress has been made as regards its ontology. Lazer et al. (2018) define it as fabricated information that imitates media content in form, but not in the process of making it or the intention of the organization behind it. Pennycook and Rand (2018) talk about striking content created for dissemination on the social media, which usually contains highly partisan content in order to boost public engagement. From a journalistic perspective, Amorós-García (2018) describes it as “false information designed to pass as news with the goal of spreading a deception, or deliberate disinformation in order to obtain a political or financial goal.” Nielsen and Graves (2017) identify other uses of the term, such as covering tendentious news, use of partisan rhetoric, use of false or scandalous statements by politicians, etc. (see Figure 1).

As regards the categorisation of this fake news, the scientific community has also contributed various classifications (Wardl, 2017; Higgins, 2017; Nielsen and Graves, 2017; OpenSources.co, 2018; Zimdars, 2016). In most of these taxonomies it is possible to appreciate two common elements that should be highlighted: the intentional motivation and the disinformation it creates. With regard to this last matter, the European Union, in its deliberations with experts and in one of its official reports dedicated ad-hoc to this subject, has tended to favour the use of the term “disinformation” to refer to the phenomenon, with the goal of avoiding confusion in political, media and academic debates. This body understands disinformation as “false, inaccurate or misleading information designed, presented and promoted to intentionally cause public harm or for profit” (Baídez, 2018; Guess, Nyhan, Reifler, 2018; European Union, 2018).

Figure 1: Nielsen and Graves' proposal to classify fake news (2017)



Source: Own adaptation with original information by Nielsen and Graves (2017)

It would also be useful to take into account the technological and social context that has favoured the rise or proliferation of false news content. Although rumours are an inherent part of being human beings in society and journalistic sensationalism is a reality with a long tradition, it is nonetheless true that the rise of fake news in the time of post-truth coincides, among other things, with the rise of social media as communications instruments. The consolidation of the easy-to-use social media –especially Twitter and Facebook– have nurtured the growth of fake news (López-Borrull, Vives-Gràcia and Badell, 2018).

In this regard, according to the data provided by the Reuters Institute in its 2018 Digital News Report, the consumption of news on offline media continues to fall and the general trend is for readerships, particularly younger ones, to move onto more private applications to read and discuss news. In fact, the latest data in this report, from 2019, corroborate the notion that the social media and instant messaging systems are now on a par with television in terms of news consumption: four out of ten Internet users prefer online sources, compared to 42% who prefer television. What is more, the social media offer impressive communicative possibilities for those broadcasting companies that aim to expand on a message, as well as favouring direct interaction with and among citizens, the creation of communities and the establishment of a bi-directional communication model (Rodríguez-Andrés and Ureña-Uceda 2012). In this regard, Twitter has become a consolidated medium in political communication (Campos-Domínguez, 2017), becoming one of the most powerful communication mechanisms in history, changing the Internet and completing the social shift initiated by blogs in the late 1990s (Rodríguez-Andrés and Ureña-Uceda 2012).

Given this situation, the aim of this study is not to focus on the debate around the definition or taxonomy of fake news. In fact, it is no easy matter to obtain a clear definition of what the scientific community recognizes as fake news. This study shares the reflection of the experts who worked with the European Union, and situates its analysis within the framework of the disinformation that low-quality journalism generates within a politically polarized context (specifically, relating to the Catalan independence movement). This context favours the proliferation of fake news due to the confirmation bias of participants in a digital conversation. Its analysis is also embedded in the consequences of this situation, described from a perspective of digital sociology.

1.2. “Media neopopulism”

This study views the social context as consisting of masses who are saturated with information, and who self-communicate (Castells, 2009) using social media and instant digital messaging services. It therefore researches, from a relational point of view, the interactions that occur on Twitter after the publication of a political news item that promotes disinformation.

With respect to the contribution to the new communication paradigm of the social media, fake news and other contemporary elements, it is important to mention the recent reflections of Tornero, Samy and Tejedor (2018). These authors propose moving towards a new model they call "media neopopulism", where fake news and disinformation find their place and function, promoting tendencies to sentimentalism, demagoguery and self-isolation among communities that debate in the public space.

According to Tornero, Samy and Tejedor (2018), referring to other authors such as Gottfried and Shearer (2016) and Fletcher et al. (2018), this media populism is characterized by: 1) the accentuation of the spectacularisation of politics; 2) the continuous erosion of the classical media as sources of information and filters applied to the quality of information; 3) the hegemony of the social media; 4) a growing personalism in politics which strengthens leaders with media presence who are able to overcome or bypass traditional political institutions; 5) and the emergence of an emotional dimension in discourses, to the detriment of realistic and rational analysis.

Along these same lines, these authors collate other reflections from the last century, such as those by Baudrillard (1991), Chomsky (1989) and Baumann (1993), which point to a change in communications paradigm, towards more radical public discourse and the resurgence of propaganda-style methods assumed to be something of the past within the contexts of liberal democracies. In fact, we have gone beyond "the paradigm of spectacular mediatization" of communication in the public space which was in place previously. This paradigm was characterised by the intimate connection between the growing trend of commercialization of public discourse (especially through advertising and marketing) and its consequences in the profound transformation of political discourse. The same authors point to "emotional hypertrophy" as a major element acting within this paradigm, and offer a reminder that the most significant trend is the systematic subordination of fact-based and rational discourse to another, emotional and theatrical, kind, based essentially on the strengthening of spectacle and dramatization (Tornero, Samy and Tejedor, 2018).

This new communication paradigm is, according to Tornero, Samy and Tejedor (2018), indicative of going beyond the spectacular mediatization of the capitalist liberal context and involves a regression to the past, in which ingredients of paradigms thought to be obsolete are recovered. This is the setting, then for the proliferation of fake news, emotionalized audiences, the use of more classical propaganda mechanisms by different agents, etc.

1.3 Disinformation, and isolated and dialectic spaces

The digital conversation that arose with regard to the news item analysed in this study (which we could place nearer to "poor journalism" than to fake news, according to Nielsen and Graves' classification) is a good example of this incipient new communications paradigm and of the existence of two spaces on the social media. These frequently appear in opposition, in clearly polarised political and social states: on the one hand, endogamic spaces where one's own "tribe" is primary and where the content that circulates, which may well be dialogic, contributes almost exclusively to reinforcing the beliefs of that community; and, on the other hand, more dialectic spaces, where more plural and divergent information, perspectives and interactions come into contact.

Dialogue (from which the term "dialogic" comes) and dialectic are concepts that have been extensively studied and theorized (Abellán-García, 2012). The sociologist Richard Sennett (2012) distinguishes between dialectic communication (oriented towards the explicit meaning of statements, and by which a common understanding or synthesis is sought) and dialogic (oriented towards what is implicit and which is not aimed at a kind of synthesis, but rather at understanding interlocutors in all their complexity, resulting in a less competitive interaction) (Morales i Gras, 2017). In this study, these terms are simplified somewhat in order to describe two situations that coexist on the social media: spaces that tend towards isolation and which produce eminently "dialogic noise", and more dialectic spaces, that seek solutions in which some ideas win out over others.

This study aims to contribute to the scientific community information about the behaviour on social media of disinformation or fake news, describing the form of dissemination and the relationships that are set up in the digital conversation about this information. So, it adopts an approach close to the viewpoint contributed by Vosoughi, Roy and Aral (2018) and their research, which gives a prominent position to the ideological variable in the circulation of false information; in particular, political news reaches into more spaces, is disseminated more quickly and affects more people than news related to other themes, basically because of humans' cognitive bias.

With regard to that stated above, the hypothesis that has guided the study considers that, in polarized communicative spaces such as the context analysed (regarding the Autonomous Region of Catalonia) the digital conversation tends toward an isolated space where communities are impermeable to ideological difference. Something else that contributes to this situation is confirmation bias, which is especially present in the dissemination of disinformation. The study has also sought to obtain empirical, verifiable data regarding these social media spaces, which are more dialogic than dialectic and where interactions often do not contribute to closure but rather are oriented principally at confirming the beliefs of the group the user belongs to.

2. The case study

On 13 September 2018 the Spanish digital media organisation Elconfidencial.com published a news item that, in just a few hours, created a significant impact on social media and also among many traditional and digital media. The content of the news item was related to the President of four months of the Catalan Parliament (the Generalitat), Joaquim Torra Pla (Quim Torra), and an icon of worldwide fame, known for his contribution to the struggle for civil rights, Martin Luther King.

The link from the news item signed by David Brunat was first published on Twitter on the morning of 14 September 2018. The headline of the item, literally replicated on Twitter, said the following: "*El Instituto Luther King de EE.UU. pide que Torra deje de usar su figura: 'Es hipócrita'*" ("The US Luther King Institute asks Torra to stop using his name: 'It's hypocritical'") (figure 2) [1].

Figure 2: News item published in El Confidencial



Source: Screenshot from the Elconfidencial.com website

The news item was connected to a statement made by Quim Torra during a speech entitled "Our moment", read at the National Theatre of Catalonia, on 4 September 2018. In the speech, Torra made a literal reference to Luther King:

That proposal that I make to the people of Catalonia can be summarized very simply: either freedom or freedom. Based on the 1 October mandate and on the great struggles for freedom that we all have in our memories, such as for example Martin Luther King's fight for civil rights, I propose an action that all Catalans should make their own, if they wish to accept it: a march for the civil, social and national rights of Catalonia; a march of citizens who take the free determination to be a constituent people (Torra, Q. 2018. Catalan Generalitat, Presidential Department).

The allusion that Quim Torra made to Martin Luther King in the context of Catalonia was used by the El Confidencial journalist to publish the news item cited, which contained statements made by the Director of the Martin Luther King Jr. Research and Education Institute at the University of Stanford (California), Clayborne Carson, without specifying the medium where the statements appeared or where he obtained the information.

Just a few hours after the news item was disseminated, Carson published [2] on his blog a "denial" (ElNacional.cat, 2018), stating the following:

I was shocked and disturbed today to discover that I had been misquoted in a Spanish newspaper that claimed I believe Martin Luther King, Jr. would have opposed the Catalan independence movement. This distorts what I actually said in response to a Spanish reporter's questions (Carson, C. 2019).

The link to the news item cited and the original ElConfidencial.com tweet (see figure 3) were repeated and retweeted over the next few hours by political and social profiles well known for their opposition to Catalan independence, such as Inés Arrimadas (from the Citizens party) and Sociedad Civil Catalana (a civil political initiative which, according to its articles of association, is against Catalan independence), and for holding important public positions whose responsibilities include the image projected by Spain in the international arena, such as Josep Borrell (Minister of Foreign Affairs, European Union and Cooperation) (see figures 4, 5 and 6).

Figure 3: News item published in ElConfidencial.com [3]



Source: Twitter

Figures 4, 5 and 6: Tweets by Josep Borrell, Inés Arrimadas and Sociedad Civil Catalana



Source: Twitter

Despite the clarifications offered by Clayborne Carson, the dissemination of the original news item continued to increase over the next few hours. Other media organizations and various Twitter users participated in the conversation, publishing and attesting to Carson's original statements, or replicating the news published by media following on from those declarations (figures 7 and 8).

Figures 7 and 8: News items published on Huffingtonpost.es and Elnacional.cat



Source: www.huffington post and www.elnacional.cat

The digital conversation did not stop with the publication of the statements made by Clayborne Carson referred to above and the news reporting his denial of the original Elconfidencial.com news item. This organization, for example, published the original audio files of the telephone conversation that the journalist had with the Institute's director. The tweets made by Borrell, Arrimadas and Sociedad Civil Catalana, as important drivers of the conversation, were not retracted or rephrased at a later stage.

3. Method

The results offered by this study form part of a broader research project that uses Big Data analysis techniques to understand different political and social phenomena. This project monitors the Twitter social networking service with respect to various different events. In order to "listen in" to the digital conversation, the Twitter Capture and Analysis Toolset, developed by Digital Methods Initiative (DMI-TCAT) at the University of Amsterdam (Borra and Rieder, 2014) is used. This is the most useful free, open source Twitter analysis tool (Felt, 2016).

The project fits into the "social media analytics" framework, which is a method and set of tools that relate the space of actors (people, organizations, etc.) to emerging social structures, focussing on the relationships that these actors establish. This analysis considers that explanations of social phenomena can be improved through the examination of relations among actors, studying the behaviour of individuals at

a micro level, patterns of relationships (the structure of the network) at a macro level, and the interactions between the two levels (Sanz-Menéndez, 2003).

In this regard, this study considers that online social media such as Twitter are useful when it comes to analysing social or interpersonal relations that enable connections among individuals or organizations. This social networking service makes it possible to capture an extensive variety of information either in real time or retrospectively, offering unprecedented access to records of online human activity over time (Del Fresno-García, 2014). Thus, this study observes the ways in which actors are linked, determining the general structure of the network, its groups and the position of unique profiles within it, in order to explain its structure.

With this aim, the methodology proposed is based on graph theory. This has demonstrated its usefulness in social media analytics for three reasons, as Sanz-Menéndez (2003) explains: in order to use a vocabulary that can be employed to analyse many characteristics of social structures; to offer mathematical operations by means of which these characteristics can be analysed and measured; to make it possible to test theorems regarding graphs and, therefore, deduce and test certain statements.

The corpus employed in this study was obtained automatically through Twitter's Application Programming Interface (API), a free, public service offered by the platform. The data captured are interactions (for example, retweets, replies and direct appeals) established among Twitter users. These users are considered to be the nodes or vertices of the network, and the edges are the interactions established among them. After the network's graph was modelled, the Gephi software (Bastian, Heymann and Jacomy, 2009; Chomsky et al., 2009) was used, and a series of network analysis algorithms were applied, such as the Louvain Multilevel community detection algorithm (Blondel et al., 2008), which gives an account of the different communities that respond to different conversations that can be identified in the data. To give a clearer view of the network and to favour an interpretation of the phenomenon analysed (Venturini, Jacomy and Jensen, 2019), the Force Atlas 2 algorithm (Jacomy et al., 2014) was also applied; this gives a representation of proximity between those nodes that have interacted, and distance between those nodes that have not.

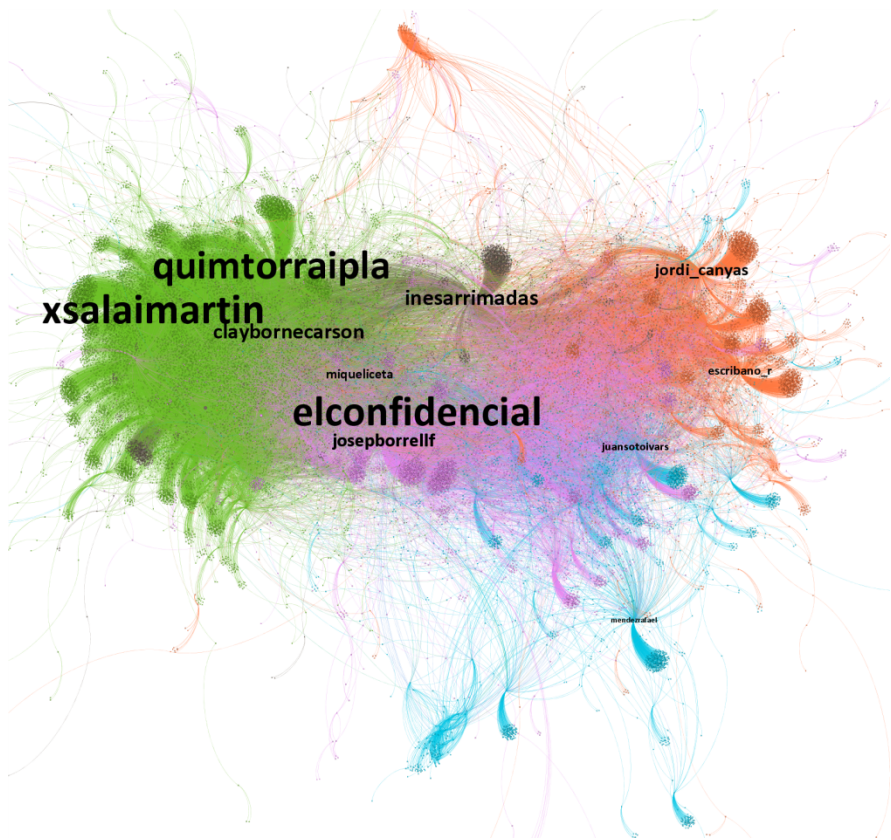
Bearing in mind the goals and hypothesis of this study, as well as the scientific framework within which it is set, the timeframe of the study has been considered to be the spontaneous spread of the original news item and of news that subsequently arose concerning the topic. For this study, the researchers monitored Twitter for three days, which was long enough for the most important events, described above, to take place. So the time period of the study is from 13 September 2018 (the moment of the first tweet regarding the news item) and 15 September 2018. The terms "Luther King" and "Torra" were monitored together in order to capture all the posts in which both figures were mentioned.

The research team decided to select this case in order to contribute to the growing scientific literature on the taxonomy of fake news, and the behaviour and influence of disinformation on our society. Fake news and different forms of disinformation have significantly influenced recent electoral and social processes. However, the aim is not so much to observe the false or true nature of any given journalistic product, but rather to analyse the circulation process of certain information in structures that offer full support for its participants' confirmation bias. It must be kept in mind that false information has its effect on the world of journalism, one that is in constant development, and that it has a considerable negative impact because, among other reasons, it has a high capacity for viralisation that hardly offers users or the public either space or means to defend themselves or inoculate themselves against infection.

4. Results

According to the methodological criteria given in the last section, the network captured includes 27,648 actors or users who participated in the digital conversation on Twitter regarding this controversy, establishing 76,815 connections or mentions, mainly tweets established among these users. Each actor is connected to a mean of another 3.1 actors, which means that only 0.01% of the possible connections among actors materialise. The relational density of the structure is, then, very low.

Figure 9: Graph of the digital conversation



Source: own elaboration with DMI-TCAT

The application of the above-mentioned Louvain Multilevel community detection algorithm –used both in sociological research and computational and biomedical research, and which allows massive network analysis at different resolutions– makes it possible to identify and distinguish, with colours, debates that represent differentiated communication flows [4].

In the case analysed, the morphology of the graph indicates that there exist three communities of an eminently endogamic nature (green, orange and blue) and two communities, more exogamic in nature (lilac and grey). These exogamic communities represent, on the graph, the centre of the digital conversation, grouping together different profiles that congregate on the debate in order to give an opinion or enter into the discussion. Below is a detailed description of the communities indicated, both endogamic and exogamic:

- In the green community (the most numerous one, which includes 41.66% of the actors in the network), leaders or reference points in the conversation can be identified as the profiles of the economist Xabier Sala-i-Martin; the President of the Generalitat, Quim Torra; and Clayborne Carson, Director of the Martin Luther King Institute. The contents shared deny the initial information and make reference to the statement on Carson's blog. This community is located at one end of the graph, maintaining contact mainly with the lilac community.
- The orange (18.01% of the actors in the network) and blue (7.96% of the actors in the network) communities are led by figures such as, in the first case, the Member of the Catalan Parliament for the Citizens party, Jordi Canyas; and the bullfighter Cristian Escribano. In the second case, figures such as the Elconfidencial.com journalists Juan Soto Ivars and Rafael Méndez emerge. This community spread the original news item published by Elconfidencial.com and the later response by this media organization to the accusations of fabricating fake news. As in the case given in the first point, both

clusters were located far from the centre of the graph which represents, in this case, the nexus of union between the most polarized communities.

- In an intermediate position, the lilac (24.89%) and grey (7.48%) communities were led by users such as the Elconfidencial.com official account and political personalities with a position against Catalan independence such as Josep Borrell (Spanish Socialist Party), Miquel Iceta (Catalan Socialist Party) and Inés Arrimadas (Citizens Party). All of them disseminated the initial information, received criticism from users such as Toni Soler (journalist, writer and independence activist), Rafael Pous (lecturer at Pompeu Fabra University and activist with the Consell de la República organization) and Joe Brew (data analyst), who are prominent, but not leading figures. Both the lilac community (the second largest), and the grey community (which is much smaller), are located in the centre of the graph.

So, according to the data obtained, the communities that in this study we consider to be isolated and impermeable to ideological difference make up a greater percentage (67.6%) than those communities which are open to dialogue (32.34%).

As has been explained, the algorithms implemented (Force Atlas 2 and Louvain Multilevel) made it possible to obtain these data: the first of the algorithms gathers linked nodes together, and separates unlinked nodes; the second algorithm identifies communities, taking as a reference the links between nodes. Both algorithms used together were applied to create a graph in which the central communities are those whose nodes also share links with nodes of other communities. In this regard, this study considers that these are the least endogamic communities.

Everything considered, the space for dialectic confrontation (as an effect of the debate among users supposedly informed or misinformed based on different sources) represents a smaller space in the graph than the compartments we consider to be closed, generated by dialogic noise. In fact, over two thirds of the total space of the digital conversation is occupied by less dialectic space. This observation is made possible by the graph resulting from this study, which shows a predominance of spaces where social homophily (having more links related to those with similar characteristics) is dominant, with profiles embedded in clusters far from the centre. This suggests that those who are located in these positions have more extreme postures, and potentially have a lower disposition to enter into dialogue with those who differ, and less openness to being convinced.

The opposite is the case with those references and profiles found in the centre of the graph, which represents the conversation, in that these could have been acting as "bridges" between one sensibility and its opposite, according to the interpretation that results from this digital conversation. They could constitute a "bridge" or connection point in order, in this case, to refute or redress biased or false information, and even to bring together postures that are dialectically in opposition. This position, then, is the one with the greatest dialectic potential, but it is also an enclave that is unstable due to its conflictivity. In fact, encounters among differing users in these kinds of spaces and in polarized contexts can be very disagreeable in networks dominated by political homophily, with a risk that people will only see the worst of others, thus reinforcing the feeling of belonging to a certain group.

5. Discussion

This piece of research seeks to contribute to the scientific literature regarding the function and workings of the social media and the dissemination of false information from an ideological perspective. As was indicated in the theoretical section, the specialized literature prioritizes an idea of the social media as isolated or endogamic spaces (Wu S., Hofman, J.M, Mason, W. A. 2011; Lotan G., 2011) which do not even guarantee multi-directionality, given that this depends on the use made of them (Rost, 2012). Making use of this endogamy and the confirmation bias mentioned above, disinformation is spread rapidly, without being checked or verified, by profiles grouped into communities with elements in common. This is precisely the hypothesis confirmed by this study, that is to say, that the digital conversation tends to constitute an isolated space and the communities that emerge from the conversation are not porous to ideological difference.

Authors such as Lozares-Colina (2011) contrast this social homophily with social cohesion, which gives a negative sense to the orientation taken by social media such as Twitter. Homophily means that it is more likely that practices, habits, opinions, mutually-held knowledge and common relationships will occur among individuals with equal social characteristics such as age, gender, educational level, social class or status, etc. (Lozares-Colina, 2011). It is this fact that brings together people on social networking services, which will later be used to disseminate information that contributes to creating interpretations of the facts that occur around us.

As can be seen in this study, in a context of significant political polarization, participants or people tend to relate to an even greater degree with their peers, with individuals who have similar social attributes, with greater possibilities for frequent encounters, more agreement in their opinions and similar practices (McPherson, Smith-Lovin and Cook, 2001). In any case, with a view to the social cohesion sought by democratic societies, it could be very valuable to identify these nexuses of union, or spaces of centrality or communality in different conversations and in public debates, in order to influence, with greater precision, those groups with differing opinions. This result is therefore of great interest from a strategic point of view, although it is still a major challenge for those agents who wish to influence social and political contexts, in that those central spaces in digital conversations can be considered as coveted spaces for dialectic struggle.

Another of the potentialities in this research is the case study selected, which could act as a model for similar conversations and contexts. This case study took place in a society, the Spanish one, which is very aware of this matter, and which the Eurobarometer of autumn 2019 put as the top nation when it came to detecting fake news, or news that presented a distorted reality, although with relatively less confidence in terms of its own ability to detect these contents (Eurobarometer, 2019). The study is also connected to an event that occurred in a highly polarized context, with opposing positions that are reflected in the traditional media and in the opinions posted to the social media. What is more, the political and social event analysed occurred a few months after two of the most important social media organisations announced measures to control disinformation and to stop users becoming victims of fake news: Twitter cancelled 70 million accounts between May and June 2018 (Washington Post, 2018), and Facebook removed, in August 2018, hundreds of accounts from Iran and Russia for committing supposedly "coordinated inauthentic behaviour" (Facebook, 2018).

As with all case studies, the analysis carried out also had some limitations inherent to these kinds of approaches, such as the difficulty in extrapolating results to other cases; in this regard, its usefulness resides essentially in the effectiveness of the methodology employed and in the possibility of replicating the study in other, similar cases. Furthermore, it is worth mentioning that the people or organizations that intend to make progress in terms of the potential virtues offered by this study, could systematise this kind of practice in order to affect public opinion.

Furthermore, it is worth remembering that this study situates the problem of fake news and disinformation within a broader context of a change of communication paradigm, observing the phenomenon from its sociological and relational perspective. In this regard, these kinds of study aim to emphasise the social research focus, observing the connections among the actors who interact within the social context. In fact, it is the traces we leave on the social media that demonstrate these connections among entities, as well as the patterns of our behaviour, and antecedents and consequences of that behaviour (Schmidt, 2002).

This case study, then, aims to contribute to the scientific debate that has arisen regarding the reasons why the public believes and spreads fake news. Recent studies, such as the one by Pennycook and Rand (2019) attribute its greater influence to a kind of cognitive laziness that is a result of the massification of data and information that we are currently experiencing and that, therefore, open up a new area for study in this field. They therefore minimize the impact of ideological or partisan reasoning, which differentiates their work from the current that is presently dominant, which attributes the rapid dissemination of falsified content to confirmation bias (the public's need to ratify its beliefs).

The case analysed here points in this last direction. Evidently a certain "cognitive laziness" can happen when disseminating disinformation massively on the social media. However, it is also clear that the ideological poles that can be seen in other spaces of daily life have their reflection in the digital conversation, and for this reason, confirmation bias is an essential factor. The key in this regard is that political polarization favours the proliferation of fake news by means of confirmation bias: receivers of messages seek those inputs that confirm their own beliefs, tastes and emotions. In short, ideological polarization is the strongest force that pushes us to disseminate content that misinforms.

It is here where we would like to raise the reflection about post-truth stated at the beginning of this study: "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief" (Oxford Dictionary). Why does this happen? Among other reasons, because of the "backfire effect" explained by Nyham and Reifler in 2006: if an individual has a certain belief, her or his determination will be to protect it, and if it is confronted or opposed, that person's reaction will be to defend it, rather than to question it.

The "backfire effect" and the elements viewed in this case are related to concepts common to different societies in different geographical areas. This is not a matter, then, of where this phenomenon occurs, but rather of identifying how polarized a society's digital conversation is in order to intuit the homophily of its online relationships and foresee the high viralisation of false information in digital communities. This idea,

sometimes known as the "echo chamber" effect, has been widely studied by authors such as Törnberg (2018).

6. Conclusions

In our days it is obvious that the scientific community has a great interest in questions that still require clear answers, such as the reasons why lies, disinformation, sensationalism, etc. spread in the Internet era. There exists a sociological theorem known as the Thomas Theorem which states that "if people define situations as real, they are real in their consequences" (Thomas, 1928). The truth, then, is not as important in guiding people's behaviour as credibility: that a situation be interpreted, due to its appearance, as true. This is one of the premises that explains the success of fake news.

Among the many factors that might give credibility to a situation is what in research in the field of social psychology is called "confirmation bias". This is the tendency to grant validity to information that confirms or fits into an individual's prior belief set. People, then, have a tendency to belief what coincides with and reinforces our conditions. Furthermore, it is our option whether or not to accept those pieces of information that contradict our beliefs, among other reasons because of the "backfire effect" referred to above.

The context in which we live obliges us to navigate a flow of continuous communicative operations, where the majority have importance for us in helping us to describe political and social contexts, as well as other realities. We therefore live engaged in a continuous endeavour to select those communicative interactions that we should take seriously and those which we should reject or ignore. So the question is simple: given this situation, what is the place of the social media?

This study shows that in a specific case of political polarization and intense communicative activity, the social networking service of choice for political debate, Twitter, works mainly as a closed compartment: almost seven out of every ten participants in the conversation analysed participate as part of clusters oriented towards reinforcing their own beliefs and in order to communicate with people of similar characteristics. Despite this, there nonetheless exists a space with greater potential for dialogue, involving three out of ten conversation participants. This is a smaller community, but with greater potential to promote debate in spaces such as those offered by the social media.

The conversation analysed is a good example of how social media can become both closed compartments (the green, orange and blue communities shown in the resulting graph) and dialogic and eventually dialectic spaces (the lilac and grey communities). The opportunities to establish connection with people who think and act differently are abundant. However, social logics and the most basic communicative biases, in this communication paradigm called by some authors, "media neopopulism", often leads us towards endogamy.

The polarization of the context in which this study took place (the Catalan bid for independence) involves a division of the communicative space that facilitates the dissemination of false information and *de facto* denies a right to reply. Most of the participants in the conversation are part of communities that are impermeable to ideological difference. Making them permeable to the debate and strategic pleas –going beyond criticism and demands for rectification made to their community leaders– is essential for anyone wishing to influence, and anyone open to being influenced.

Bearing in mind that the tactic among creators of false news is to use highly partisan political content in order to boost "engagement" and improve their visibility, disinformation –whether on the Internet or off it– is successful when it fits congruously into people's previous beliefs. In this regard, so-called post-truth does not constitute a very important innovation in this new period of mass communication. What is new is the descriptive capacity that we now have with regard to these phenomena.

In short, this piece of research reinforces studies demonstrating how Big Data can make it possible to better know our societies' readers, voters, consumers and users, as well as how we can be manipulated due to tendencies such as the "backfire effect" and confirmation bias. Thus, in the case analysed, news content tending towards sensationalism circulates around previously segmented publics or previously constituted networks of affinity.

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Notes

1. Link to the news item: <https://bit.ly/2xeyBku>
2. Link to the press release published by Clayborne Carson. <https://clayborne.wordpress.com/2018/09/14/on-martin-luther-king-jr-and-the-catalonian-independence-movement/>
3. Given here are links to the content of the tweets figures included in this section. figure 3: <https://bit.ly/2lZk9u>; figure 4: <https://bit.ly/2mmijsp>; figure 5: <https://bit.ly/2kDDMsD>; figure 6: <https://bit.ly/2kNCGKI>; figure 7: <https://bit.ly/2lXoHC4>; figure 8: <https://bit.ly/2lTbABG>
4. The colours were allocated by the algorithm and the publishing software. This study keeps those colours in order to describe the communities, referring to them by their colour.



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