Dottorato di Ricerca in Communication, Markets and Society

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Fake news diffusion on digital channels: An analysis of attack strategies, responsibilities, and corporate responses

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Introduction

Fake news has always existed. However, in the digital environment its spread is now faster and uncontrollable (Di Franzo & Gloria-Garcia, 2017; Grinberg et al., 2019). As a matter of fact, according to some authors (Bovet & Makse, 2019; Mills et al., 2019; Vargo et al., 2018), digitization allowed fake news to propagate more rapidly than it ever has before. Particularly, the 2016 U.S. presidential elections showed the fake news power and brought it to the center of the academic debate. According to Guess et al. (2019), 27.4% (i.e. 65 million people) of Americans aged 18 or older visited an article on a pro-Trump or pro-Clinton fake news website during the final weeks of the election campaign. Moreover, Guess et al. (2019) argue that pro-Trump or pro-Clinton fake news websites represented an average of 2.6% of all the articles that Americans read on website news during that period. In this scenario, especially social media such as Facebook and Twitter are accused because of the fake news dissemination (Jang & Kim, 2018; Spohr, 2017) – indeed, on social media platforms content can be shared among users with no third-party filtering, fact-checking or editorial judgement (Allcott & Gentzkow, 2017).

In addition, with the recent worldwide spread of the Covid-19 pandemic which has generated a situation of uncertainty, the phenomenon of fake news has become more relevant for organizations and society at large. In that period, indeed, the use of digital channels to retrieve information has grown exponentially and, consequently, disinformation has spread more easily, so much so that the World Health Organization has coined the term “infodemic”. For example, according to a recent study by Statista (2020), 60% of young people between the age of 16 and 24 have recently used social media for information about Coronavirus, and 59% have found fake news on that topic.

Generally, fake news threats organizations with its spread capability in the Internet – for example, Jahng (2021) argues that fake news with a high intention to damage the brand is perceived and assessed as a serious organizational crisis. Organizations, therefore, need to be able to make strategic decisions considering the intent of fake news to damage their corporate reputation and, in general, their intangible assets. Indeed, nowadays, according to a recent study by Ali (2022), despite the substantial risk of reputational damage from a fake news crisis,

the management of this type of crisis appears beyond the normal operational and routine matters of a company, requiring the management of a fake news problem within a strategic communication (Jahng et al., 2020; Zerfass et al., 2018), and being a victim of fake news requires organizations to plan carefully a response strategy to minimise its negative impact (Vafeiadis et al., 2019). For these reasons, more and more academic studies have focused on the topic of fake news in the corporate communication and marketing management fields (e.g., Bethon et al., 2018; Di Domenico et al., 2021; Jin et al., 2020; Obada, 2019; Wisker, 2021).

In particular, scholars so far have investigated the influence of fake news on consumers' attitudes towards companies (Di Domenico et al., 2021), its ability to convey misleading beliefs (Lewandowsky et al., 2012) and to create confusion about past experiences with brands (Rapp & Salovich, 2018). Specifically, recent studies showed that fake news negatively impacts the company sales and also diminishes consumers trust in brand and consumers' attitudes and behaviors toward brands and social media platforms (Farah et al., 2022; Munzel, 2016; Mahdi et al., 2022). In this scenario, corporate communication strategies play a key role in combating disinformation in the digital environment, as fake news can produce a loss of brand trust, for example when the brand is advertised alongside the fake news (Visentin et al., 2019).

Hence, although in academic literature there is a growing interest towards the impact of fake news, and in general on corporate communication strategies to combat this phenomenon (Fulgoni & Lipsman, 2017), scholars agree that more research is needed to provide a better understanding of the fake news phenomenon (Chen & Cheng, 2020).

Indeed, no previous study has focused on how fake news attacks the corporate reputation with reference to the different phases of the fake news life cycle, i.e. the various effects of the fake news during its spreading journey on the web (e.g., Colliander, 2019). The aim of this PhD thesis is threefold:

(1) to investigate how fake news, during its life cycle, attacks corporate reputation;

(2) to identify the key actors involved in the stemming process of fake news and their role;

(3) to identify the more effective response strategies of organizations threatened by fake news.

To achieve the aim of this exploratory research, a mixed-method approach was adopted. In particular, a qualitative content analysis was conducted on a database of 454 fake news headlines; four longitudinal case studies were analyzed; a survey on a sample of Italian users was conducted to investigate their perception and the more effective response strategies of the organizations attacked by fake news.

This PhD thesis consists of five chapters. The first chapter is a review of the academic literature on fake news, i.e. a systematic review conducted on a sample of 222 studies whose main outputs are a semantic map of fake news' studies and a taxonomy of the dimensions of the concept of fake news. The second chapter of the thesis represents a scenario analysis about the fake news phenomenon, and in particular it focuses on the topic of disinformation during the Covid-19 pandemic in the European Union. The third chapter summarizes the methodology adopted to achieve the aforementioned research objectives. The fourth chapter presents the results of the qualitative content analysis, i.e. it identifies four different strategies of fake news attacking corporate reputation, and the findings of the longitudinal case studies. Finally, the fifth chapter summarizes the results of the survey conducted on the sample of Italian citizens and on the response strategies to fake news threat most appreciated by the respondents. The PhD thesis ends with a conclusion and discussion of the results.

Over the years of the PhD course, the results of this research have been presented at various national and international conferences, including the Conference of the Società Italiana di Marketing (SIM) at LIUC University in Varese (2020), the EUPRERA Congress at Universidad de Navarra in Pamplona (2021) and the Conference of the Società Italiana di Management (SIMA) at Bocconi University in Milan (2022). In addition, some chapters of this thesis have been published as book chapters by national and international publishing houses (e.g. Franco Angeli, Edward Elgar Publishing) after passing the peer review process, as better specified in the footnotes at the beginning of each chapter.

Chapter 1.
The Threat of Fake News:
A Systematic Literature Review[1]

1.1 Introduction

Fake news is not a new phenomenon – its origins date back to before the printing press and rumor probably existed as long as people have lived in groups. However, the first fake news dates back to the invention of the press: the spread of literacy has made it possible to disseminate information rapidly and in this period the phenomenon has become more visible (Burkhardt, 2017). In 1844, the American author Allan Poe wrote a hoax newspaper article saying that a balloonist crossed the Atlantic in just three days. Due to the details used by Allan Poe in the storytelling, many readers believed the news, which turned out to be false only when journalists failed to contact the balloonist. Therefore, fake news has existed for a long time and the motivations that prompted the authors to write fake news are different. Some authors probably had good intentions, others intended to harm something or someone (Burkhardt, 2017).

In recent years, there has been an increasing interest in fake news phenomenon which has become relevant both for scholars and professionals (Albright, 2017; Spohr, 2017). Indeed, since the 2016 U.S. election, the phenomenon has been analyzed from different perspectives, and a varied and fragmented literature was formed on the topic of fake news. There have been several studies in the literature reporting various fake news interpretations. However, far too little attention has been paid to defining 'fake news' (Gelfert, 2018; Shu et al., 2017), and a fake news systematic review is still lacking. Hence, the aim of this chapter is twofold: on the one hand, to provide an overview of the fake news phenomenon by conducting a systematic

[1] The results of this systematic literature review have been presented during the 2021 EUPRERA Annual Congress:
Olivieri, M., Murtarelli, G., & Romenti, S. (2021). *The threat of fake news: A systematic literature review*. In EUPRERA Annual Congress 2021, October 7-9, Pamplona, Spain.

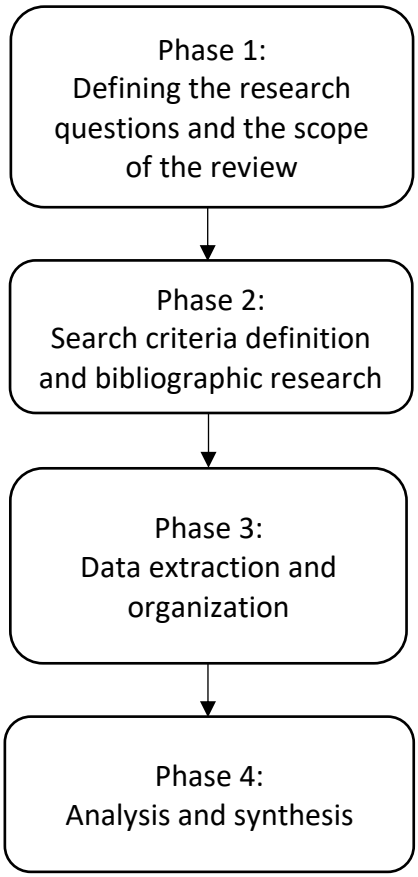
review, with a particular focus on fake news' theoretical underpinnings and methodological issues related to them; on the other hand, to identify the fake news' dimensions and the motivational factors for its dissemination and potential effects.

Specifically, this chapter is organized as follows. First, the following paragraph focuses on the research questions which guided this systematic literature review and the methodology adopted for conducting the analysis. Second, the chapter continues with an overview of the findings of this study by starting with a semantic map which represents the disciplinary areas that studied the phenomenon. Paragraphs dedicated to the dimensions of fake news, dissemination strategies and propagation models, and the impact on brands follow. Highlights and remarks conclude the chapter.

1.2 Method

Systematic review is a methodology used to identify existing studies, evaluate them, analyze data and report contributions to clarify what is not known (Denyer & Tranfield, 2009). Specifically, this study was developed in four phases (see Fig. 1.1).

Fig. 1.1 The research process



Source: Our elaboration

Phase 1. The phase 1 was focused on defining the research questions and the scope of this review. Indeed, the general purpose of this paper is to identify, categorize and analyze relevant streams of the literature with the aim to provide new insights about fake news phenomenon. To this end, we developed our study across the following research questions:

RQ1: What are the disciplinary areas that analyze the phenomenon of fake news and its specific dimensions the most?
RQ2: What are the theoretical underpinnings of the fake news' phenomenon in Management literature?
RQ3: What are the reactions and response strategies of companies to this phenomenon?

Phase 2. The second phase was focused on identifying inclusion criteria, that are the time period, key words, publications type and academic databases. EBSCO, Digger, Google Scholar, ResearchGate and OPAC were searched between December 2019 and May 2020. As for the time period, we opted for the time frame 2010-2020 because most of the studies prior to 2010 refers to fake news as entertainment TV shows such as 'The Colbert Report' or 'The Daily Show'. At this stage, the term 'fake news' was used as a key word individually and combined with each of the following terms: 'definitions', 'dimensions', 'features', 'studies'. Reference lists of included studies were inspected to identify additional relevant studies. Furthermore, authors assessed the titles and abstracts of all retrieved references to identify studies that appeared to fulfill the inclusion criteria, and all potentially eligible articles were retrieved in full text. This research step has produced a large number of results, especially in the form of research papers and journal articles, which have been selected and analyzed. The analyzed contributions were both empirical and theoretical.

1.2.1 Data collection

Phase 3. The phase 3 was focused on data extraction. Relevant data information was extracted by authors into a Microsoft Excel database and organized in a scheme with the aim to categorize authors, journals, year of publication, study type, fake news' definitions, dimensions, features, research questions, theories and limits of the analyzed studies. In this Microsoft Excel worksheet, the 222 analyzed studies were organized into four disciplinary areas (see Table 1), i.e. technological science, communication, political science and psychology.

Table 1.1 Systematic literature review sample

Disciplinary areas	Information technology	Media studies	Political science	Psychology	Management studies	Tot.
No. of analyzed articles	79	75	37	18	13	222

Source: Author's elaboration

1.2.2 Data analysis

Phase 4. Finally, the phase 4 served to analyze the contributions and elaborate a synthesis of our findings. To this end, the chapter presents the clusters of fake news' dimensions emerged from the systematic review and then the motivations and effects of fake news' creation and diffusion.

1.3 Fake news in the academic debate

This paragraph is dedicated to the presentation of the results of this interdisciplinary systematic review conducted on the topic of fake news. The findings of the study are presented in the order dictated by the research questions, and therefore we have dedicated the first paragraphs to the understanding of the disciplinary areas that analyze the phenomenon of fake news and its dimensions; the following paragraph on the mechanisms of propagation and dissemination of fake news with a more in-depth analysis on the role of social media; I subsequently focused on the effects of fake news for both society and companies; finally, the last paragraphs of the study findings are dedicated to fake news deception techniques and models identified as most effective by the fake news literature.

All the paragraphs of the findings focused in particular on the models and theoretical constructs on which the studies of fake news are based. Indeed, the aim is to reconstruct the theoretical background of the fake news' literature by identifying a research gap to start from for the empirical analysis which will follow in the next chapters of this thesis.

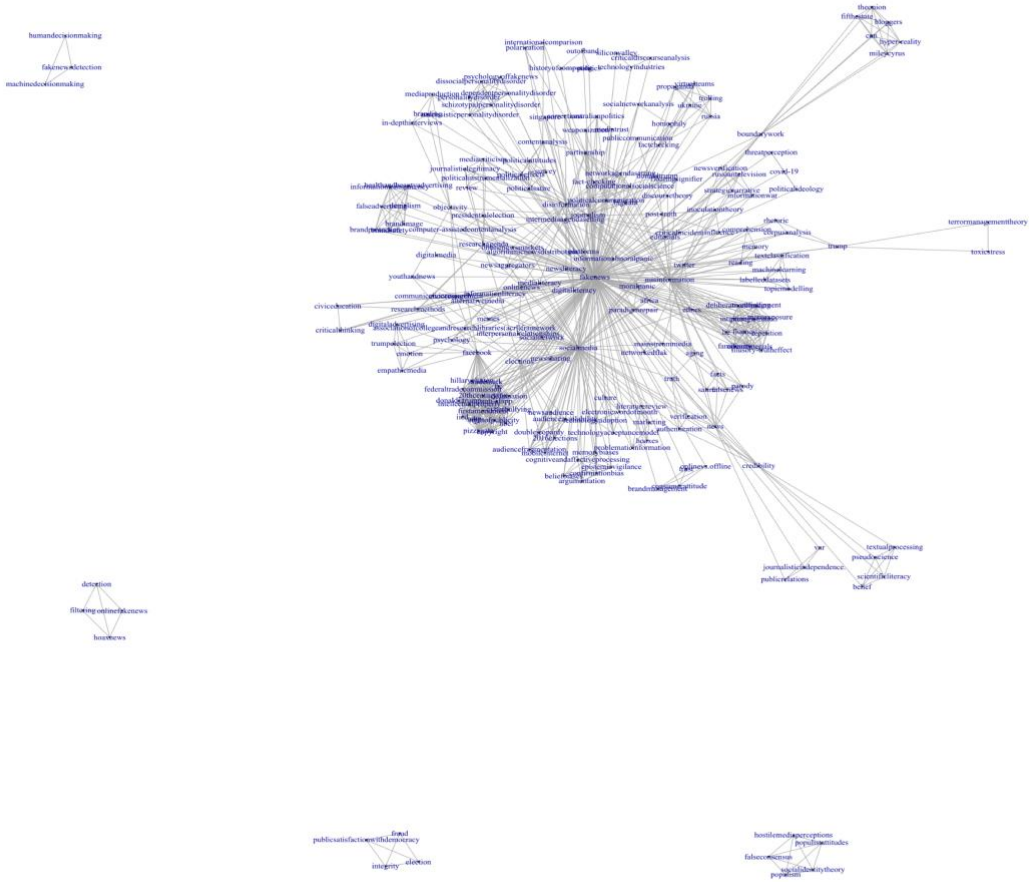
To answer *RQ1*, the analysis identified both the research areas and streams that have addressed the topic of fake news considering different research perspectives and theoretical constructs. Secondly, we focused on the dimensions of fake news emerged from the analysis of the definitions of fake news and the theoretical backgrounds referred to in the 222 studies analyzed for this systematic review.

1.3.1 Overview of fake news' research

In order to identify the groups of scholars who have dealt more extensively with the phenomenon of fake news, I have collected all the keywords used in the scientific articles analyzed for this study were collected to identify the co-occurrences between these keywords. To do this, we used the R program with the aim of developing a semantic map which visually represents the disciplinary and research areas that most study fake news.

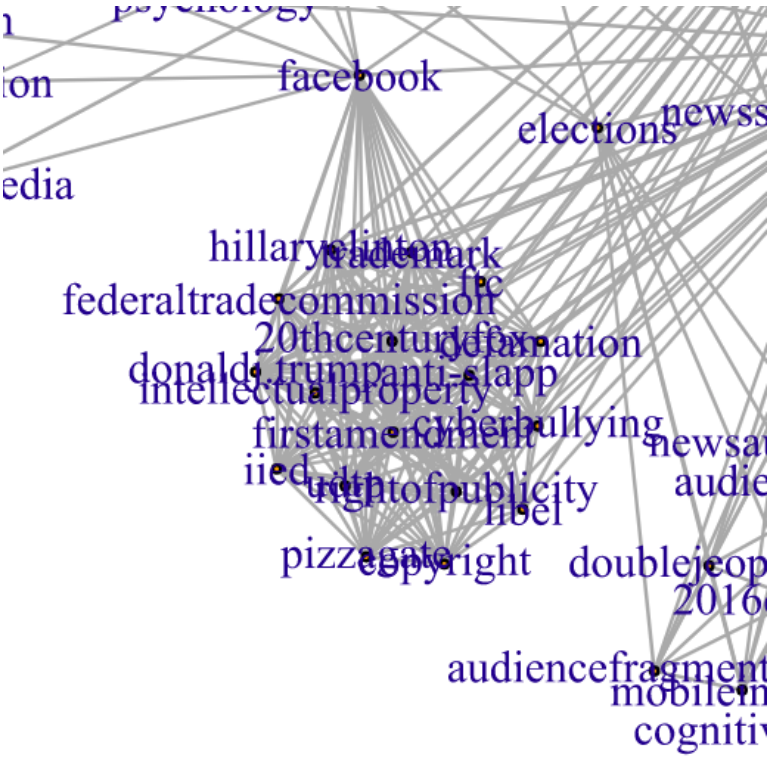
The semantic map represented in Fig. 1.2 visually clarifies that there are no defined and precise research areas in the literature that studied the phenomenon of fake news, rather there is a strong mixture and cross-fertilization of the research lines analyzing the phenomenon. Indeed, a first analysis of the semantic map reveals that there are research focuses - for example, social media - which collect a series of studies from multiple disciplinary areas: this is a signal of a mixture of research streams that study fake news. However, it should be added that some areas are clearly visible and have developed their own research stream within fake news studies. For example, the topic of US political communication and the effects of fake news on the 2016 presidential elections has collected a large number of scientific articles. The area that studied this phenomenon is visible in fig. 1.3 and it is clear from the strong connections and proximity of the keywords that line of research referring to US politics is very dense and saturated.

Fig. 1.2 Semantic map of fake news studies



Source: Author's elaboration with R softwar

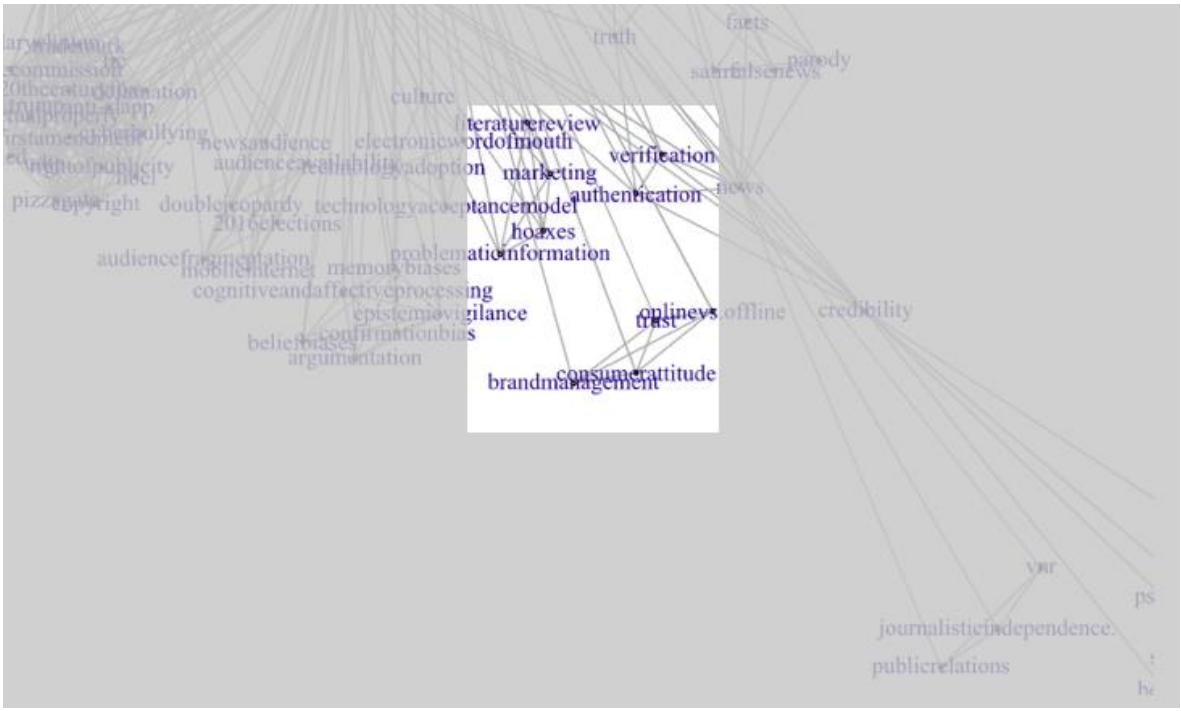
Fig. 1.3 US politics communication in the semantic map



Source: Author's elaboration with R software

As for the management research (see fig. 1.4), which represents the reference literature for this study, in the semantic map we note a fragmentation of the keywords used in the papers that demonstrate a disrupted literature, but which revolves around two key concepts, i.e. 'consumer attitude' and 'brand management'. It is therefore noted that the management literature is starting to gain its own space in the studies on fake news, composing its own identity and developing streams of research concerning both marketing management and corporate communication. This topic will be addressed more specifically in paragraph 4.4 of this chapter, with references dedicated to the theoretical constructs at the basis of management studies on fake news.

Fig. 1.4 Management studies in the semantic map

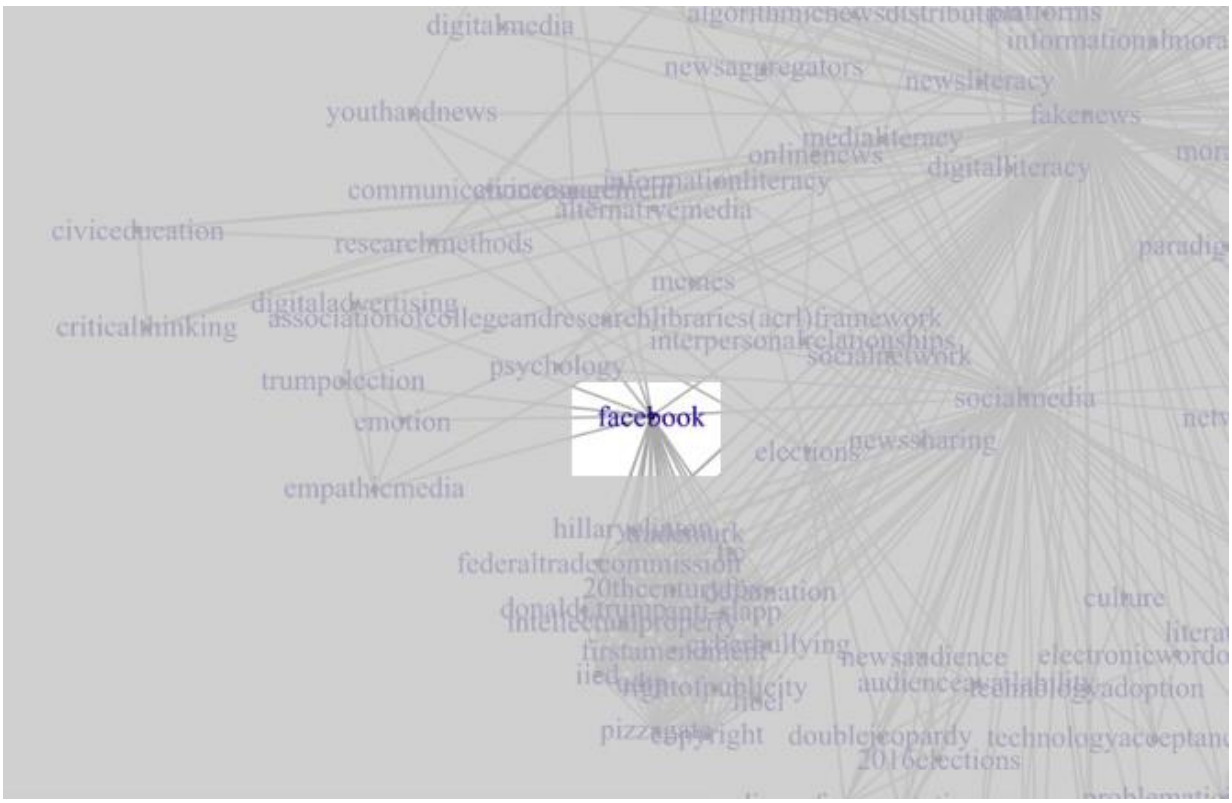


Source: Author's elaboration with R software

Facebook deserves a separate discussion in the analysis of the semantic map which visually represents the studies of fake news in literature. Unlike other social media such as Twitter that is a part of consolidated research streams or in groups of interconnected keywords, Facebook seems to be a connector of different disciplinary areas and fields of scientific investigation. As can be seen in fig. 1.5, Facebook is far from groups of keywords and represents a crucial node, a real bridge, for several different studies. On the one hand, Facebook is linked to concepts such as 'emotion' and 'psychology' which concern the cognitive sphere; on the other hand, this keyword is aimed at contents such as 'elections', 'Trump elections', 'news', which belong to the US political communication area (fig. 1.3).

This is an interesting result because it shows that Facebook, although it is a social media that has been studied in the field of fake news, is not included in any research stream probably because of difficulty for researchers to extract data and information from this platform that does not allow analysis and in-depth research.

Fig. 1.5 Facebook in the semantic map



Source: Author's elaboration with R software

Going deeper into what these studies claim, the term fake news is widely used in contemporary language for indicating different types of information disorders such as misinformation and disinformation. However, every disturbance has its peculiarities and differs from others, especially if you take it in considering the aims of those who produce the contents and the effects on the individual users on communities, for which it is appropriate to delineate carefully at least some facets of this tangled aspect of the world of communication, both on and offline: (1) mis-information category of information content disclosed on the Internet untrue or inaccurately reported, likely to be acknowledged as real; (2) bad information category of information content based on real facts disclosed on the Internet and contextualized so that they can also be viral and convey a message with the specific intent to harm a person, an organization or a country, or affirm/discredit a thesis; (3) disinformation category of information content, including sponsored, artfully created in such a way as to be plausible, widely disseminated through online platforms.

Generally, the discussion on the topic of disinformation suffers from inaccurate definitions that do not distinguish it from other phenomena (Karlova & Lee, 2011). For example, the terms "disinformation" and "misinformation" are used interchangeably by various scholars (Losee, 1997); while at other times, the two terms refer to variations of each other (Zhou & Zhang, 2007). Also according to the recent study by la Cour (2020), the phenomenon of disinformation can manifest in different forms and can be used by different actors. La Cour (2020) identifies three most frequent prototypes of disinformation, which are (1) a "disinformation story", that is a singular false news in an information system; (2) a "disinformation campaign", that is a campaign which collected multiple false stories related to the same topic; (3) a "disinformation operation", that is a "long-term effort to systematically deceive a foreign public" (La Cour, 2020, p. 708).

Tab. 1.1 provides an overview of various definitions retrieved in the academic literature on the topic of disinformation.

Tab 1.1 Definitions retrieved in disinformation academic literature

Category	**Definition**	**Author(s)**
Disinformation	"Disinformation is widely understood as content produced to generate profits, pursue political goals, or maliciously mislead, such as in the form of hoaxes"	Nielsen and Graves (2017)
	"Disinformation means that false information is strategically shared to cause harm"	Wardle and Derakhshan (2017)
	"It is widely understood as misleading content produced to generate profits, pursue political goals, or maliciously deceive"	Humprecht, Esser, & Van Aelst (2020)
	"Any form of manifestly false information or content, which is originally uttered or written with the intent to do harm and subsequently disseminated"	la Cour (2020)
	"False, incomplete or misleading information that is passed, fed, or confirmed to a targeted individual, group, or country"	Shultz and Godson (1984)

	"Intentional falsehoods spread as new stories or simulated documentary form ats to advance political goals'"	Bennett and Livingston (2018)
	"Information that is intentionally created and uploaded on various websites, and thereafter disseminated via social media either for profit or for social influence"	Humprecht (2018, 1975)
Misinformation	"Unintentional publication of false or misleading information"	Wardle and Derakhshan (2017)
	"A category of claim for which there is at least substantial disagreement (or even consensus rejection) when judged as to truth value among the widest feasible range of observers"	Southwell et al. (2018)
	"Misinformation refers to claims that – unlike information – are not supported by the majority of societally accepted evidence adjudicators, and reflects content that may be inaccurate, uncertain, vague, or ambiguous"	Karlova and Fisher (2013)
Malinformation	"Malinformation occurs when genuine information is shared to cause harm, for example, by disclosing private information to the public"	Wardle and Derakhshan (2017)

Source: Author's elaboration

It has often been shown that ironic images and contents such satires, parodies not created with particular ideological intentions, have been shared precisely by those who were the targets of the ironic message; in the case of memes, that is images in which ironic statements are associated with photos of public figures, which are extremely easy to generate, through specific apps or software, is happened that they were taken up by users, as they were considered as real and inserted in the debate as statements actually made by the character object of representation. Memes, trolls, and other ironic forms are often subject to misunderstandings and contribute to making reception more chaotic of information, especially for functional illiterates. These dynamics peculiar to the web help to give further value to the role of the public and of the his way of using information, making it the central and fundamental element to understand how fake news is disseminated and received (Burgess & Matamoros-Fernández, 2016).

On the Internet, communication strategies can be implemented in the short term lead to an enhancement of disinformation through content advertisements and facilitate online fraud, while in the long run they are capable of produce conditions of commercial disinformation and disinformation for purpose political-ideological. To put these strategies into practice, their creators (Chess & Shaw, 2015) make use of multiple technological resources such as capable web analysis systems to track the actions performed by users, manipulation and generation software automatic content and artificial intelligence systems, which are tools that increase the power of organizations, especially in terms of digital marketing (Colleoni & Corsaro, 2022).

In virtual space information disorders take on new aspects and find fertile ground for experimentation and colonization, in which some psychological components of the users and their approach to using the network come into play, which is constantly susceptible to change, for example due to even starting from a state of mind, and the same have different motivations to move between online information architectures (Gourarie, 2016). Digital platforms can be used to acquire information, store them, communicate them for different purposes, such as that of study, education, pleasure but also for economic reasons. Since 2016, interest in fake news has grown because of the massive use in disinformation campaigns that have had a certain effect on public opinion (Lazer et al., 2018). They have entered diversified information channels, bouncing from one environment to another on the web and meeting users, who have often searched for or just stumbled upon articles, galleries of images, videos and documentaries produced by sources of dubious reliability.

What seems complicate the situation also is to the graphic interface through which a content of disinformation is proposed: a completely false news with a graphic layout similar if not identical to a reliable one can be positioned in a web page even close to the real one, and it is not obvious that a user is able to discern which of the two reports a verified fact, it is instead possible he chooses to read the one that best reflects his convictions. A significant distinction must be made between more and less dangerous content for the company, but the line is thin since sometimes it is only when this news comes into contact with users that it can be understood as fake news and it can proved to be dangerous. It’s easy to get in touch with uninformative content, it is less easy to distinguish their veracity, who produced them and for

which reason: recently specialists from different sectors have been busy collecting in freely accessible sites, all that are fake but potentially credible news for a large audience.

Fake news, reported by users or sought after by professionals, has been denied by experts possessing specific and scientific skills, in debunking operations. In the attempt to discern the true from false, the debunkers found themselves operating in one dimension so large that it seems intent on trying to empty the ocean with a bucket; debunking activities remain of paramount importance and progress technologically, but they are not yet structured in such a way that they can cope effectively the problem of massive disinformation. Even the 'big names' of the web do they are aware of the dimension of the phenomenon and have implemented some strategies with the intention of stemming the spread of the phenomenon: one above all, Google after having invested in fact-checking shares, stopped operations since they, in addition to being extremely expensive, have not given expected results (Marwick & Lewis, 2017).

If traditional sources provided access to a certain amount of information, the Internet has proved to be a channel which has made it possible for users a remarkable liberation and broadening of one's horizons and, in most cases, the communication system in which knowledge is acquired today better than it has ever been. According to Marwick and Lewis (2017), the large-scale spread of disinformation represents one of the defects of the Internet system and its structure carries with it the risk of fragmentation, due to the increase in the capacity of individual choice which allows people to classify themselves into countless homogeneous groups.

As for fake news' definitions, Allcott and Gentzkow (2017, p. 213) define fake news as "news articles that are intentionally and verifiably false, and could mislead readers". According to the authors, this definition includes intentionally fabricated news and many articles originated on satirical websites but could be misunderstood when viewed separately on social media feeds. As an example, the news of the Pope who in 2016 supported Trump's candidacy. In that occasion, the website was a fantasy news site. Most of the articles are satire or pure fantasy, but this disclaimer was not seen on the news page and the article was shared a one million times on Facebook.

The concept of 'fabricated information' emerged also from the definition by Lazer et al. (2018, p. 1094):
'We define "fake news" to be fabricated information that mimics news media content in form but not in organizational process or intent'.

Hence, fake news doesn't follow media standards and editorial processes to ensure the accuracy and credibility of information. In this sense, fake news is similar to misinformation and disinformation. Misinformation is the voluntary dissemination of fake news for the purpose of deceive people.

Some elements of the definition are agreed among several academics: fake news is intentionally false but realistic information, fabricated with the intent to deceive and be taken as truth. It needs the look and feeling of real news in how websites look, how articles are written, how photos include attribution. Hiding under a veneer of legitimacy, it takes on some form of credibility by trying to appear like real news. If we want to be even more precise in the definition, we should split the term and analyze the two words separately. Paschen (2019) and Tandoc et al. (2017) raise the question about what is 'fake' and what is 'news'.

News is defined as 'information or reports about recent events', 'recent information about people you know', 'a printed or broadcast report of information about important events in the world, the country or the local area', according to the Cambridge Dictionary. Academics refer to this word as a new piece of information, an account of recent and interesting event, one that has a significant impact on people (Paschen, 2019; Tandoc et al., 2017). It is considered an output of journalism, so it is expected to be reliable, independent and accurate, given that it is responsibility of journalism to report objective and true information in what it produces.

For Cambridge Dictionary, *fake* is something 'that is made to look real or valuable in order to deceive people' or that 'is not what or who they claim to be'; 'not real, but made to look or seem real', 'something that is intended to look like and be mistaken for something else'. So it characterizes something that is not genuine, an imitation, something false, counterfeit or fraudulent.

Tandoc et al. (2017) suggest that the expression 'fake news' can be considered an oxymoron, since news is supposed to be true and reliable, so in its definition it excludes the concept of falsity. Furthermore, they pointed out another problem in the definition of fake news: it is hard to affirm what is real and what is fake since news is socially constructed. Inadvertently, willing or not, journalists make a subjective judgement when they choose to include or exclude parts of the information and who they report it to. Not only news is vulnerable to the preferences of journalists but also to government and political institutions, advertisers and market forces. However, in all cases, it is expected to be accurate information based on truth. There are also opinion pieces where the author explicitly says what he thinks, accountable to opinion presented, so they are not looked at as fake news (Paschen, 2019).

Moreover, fake news can be categorized according to two dimensions, i.e. 'facticity' and 'intention to deceive' (Tandoc et al. 2017). *Facticity* means 'being a fact' and indicates the degree in which fake news relies on actual elements. If facticity is high, it means that the news is reliable and accurate but if it is low it means it's fictitious. *Intention to deceive* refers to creator or author's goal to cheat and misinform people, and that can be for many reasons, as we will see later, mainly for profit or ideology.

Some types of fake news are fabricated but do not have deception as their goal. The purpose is to entertain audiences, like for parody and satire, as we will see later on. In some cases, it is an open disclaimer that they are no-factual stories. When we talk about fake news we normally tend to refer to those that have low facticity and high intention to mislead (Chen & Cheng, 2020).

In their study 'Defining Fake News' Tandoc et al. (2017) have examined 34 academic articles using the term 'fake news' between 2003 and 2017. Their output is a classification of different types of fake news.

Fabricated news

Fabrication of news articles is the typical kind of classic fake news because it is when information with no factual basis is rendered in the style of news articles to create legitimacy. In this case there is no implicit understanding between the author and the reader that the item

is false and most of the time there is an intention of misinforming. This happens in websites, blogs, social media and it's hard to tell the items are fake because they provide some semblance of objectivity and balanced reporting. The authors are not acting in good faith but is in pursue of economic and political aims (Allcott & Gentzkow, 2017). The more believable and interesting the story is, the more the reader will be willing to share it and so the greater the income for producers will be. False stories presented as legitimate journalism in this category are what most people refer to talking about fake news (Wardle, 2019).

Satire and parody

Satire and parody do not have the intention to harm but have the possibility to fool. According to Wardle (2019), if effective and intelligent they could be considered forms of art. Starting with satire, it is a way of making a humoristic criticism, usually in TV programs that mock news TV broadcast. These shows are similar to newscast, as they update and provide direct comment on current affairs with speakers behind a desk. However, the presenters are comedians or entertainers and not journalists or even newscasters. They use wry humor and irony in an exaggerated style. Their humorous motivation is transparent and clear: they criticize politicians, economics and social affairs and, being the audience knowledgeable, there is often also a laugh in the background after a punch line (Tandoc et al. 2017). Examples of these shows are TV program such as 'The Daily Show', and the Italian 'Striscia la notizia'.

Literature does not agree on whether or not satire is considered fake news, because the core content is true but the form of news report is for the sake of humor and not for deceiving. However, Wardle (2019) makes a point explaining that during the era of information disorders we are living, it is possible that satire is used to distribute conspiracies and rumors, defending itself saying it was not made to be taken seriously: it could be a strategical use to make circulate fake news. Indeed, another problem would be that if satire is re-shared many times, the next receivers could not perceive the satirical origin of the content and believe it is true. In this case it will be perceived in the sense of fake news.

For what concerns parody news, it is a technique of making up new stories with the vague plausibility of the news item. It uses humor, just as satire, to draw an audience and the presentation format is similar to news media. There is an implicit understanding between the

author and the reader that the item is false. If sometimes parody is too subtle, the item of nonfactual information can be picked up and receive coverage in mainline news. Or simply, be spread on social media, if users are out of synch with the creator of the parody: they would read and share the news or article misunderstanding the actual premise. Examples of parodies are Lercio in Italy and The Onion website in the US. Lercio produces fictional news that are humoristic and grotesque, making fun of the typical articles of sensationalist press. *Lo sporco che fa notizia* is the motto of the 'mock journalistic' website which means that controversial news becomes popular and serves click-baiting. One of the founders of Lercio explained in an interview that people who read their news normally already know that they are fake and mocking but, in this way, a reader becomes familiar with the idea that not all what he/she reads online is true, and so it is important to plant seeds of doubts. The aim is not only to entertain, but to make people reflect over the issues they read about.

Another example of parody news is The Onion. 'America's finest news source' according to their motto, it presents itself as any other news distributor. Articles imitate the factual and direct style of classical press, often offering a punch line in the title. In particular, with the advent of online journalism, The Onion took the click-baiting style as other information and entertainment websites do. Content creators of the website declared they have never wanted to spread hoaxes or fake news to disinform, but their aim was to satirize. Just by looking at the name of the source website, readers should understand what the article is all about. The Onion is very popular in the US but there are many more satirical sites people may not be necessarily aware of, so it is easier for people to fall into their tricks.

Materials' manipulation

Nowadays, anyone has access to a camera and new technologies made it easier to take, manipulate and post a photo or video, and also share others'. We are experiencing a form of citizen journalism that comes from social media sharing and with it some problems have emerged: the information overflow, the abundance of photography and the difficulties in verification made the diffusion of fake news more common. In this online scenario, visual content represents reality more than articles or captions and furnishes evidence on a fact. Users are pushed to believe something is true if they see it, as it seems proven (Sontag, 1977): essentially, stories rely on image to sell bogus narratives.

According to Tandoc et al. (2017), there are two ways to manipulate photos or videos that we can mention as a category of fake news: *manipulation* of real images or videos to create a false narrative. It includes simple adjustments in color saturation, cutting the photo to remove elements or, even more invasive, adding or removing people. *Misappropriation* of the meaning of the original image. In this case, the manipulation does not have to do with digitally altered photos but images are taken out of their original context (intentionally or not) to represent a different one. In other words, we're talking about a factual photo, not manipulated, but misappropriated to support a concocted narrative. The original image may have nothing to do with the storyline but in order to convey a message it is taken out of context.

Another way to manipulate that is in-between these two classification is strategic angle photography: in this way the audience only perceives what the creator of the visual content makes you want to see. A specific caption and a photography with a studied angle can really twist reality into something different, something desired to be shown.

The other element on which fake news leverage is the URL of the site. The URLs of well-known authoritative news sites and newspapers are often imitated, so as to make fake news sites credible to unwary users. Regarding this, we have already mentioned the case of Fattoquotidaino.com above.

Hence, fake news frequently contains retouched photos or videos, other times the images can be authentic, but taken out of context. This is the case of video frames mounted ad hoc to transmit a message different from the original one and therefore to modify its meaning and content.

Advertising

This type of fake news consists of advertisements in guise of genuine news report: it seems to be a genuine news with content featuring statistics, sources, interviews, etc. but it is an ad instead. Taking the format of news, it misleads the audience to believe it is authentic, hiding its one-sided claim (Visentin et al., 2019). Often, clickbait headlines are used to attract the attention and push the reader to click and move to a commercial site. Also in this case, the financial gain is the main intention of the fake news source (Tandoc et al., 2017).

Consequently, programmatic advertising also accompanied the diffusion of the fake news phenomenon.

Propaganda

One last type of fake news is propaganda. It is a news story which is created by a political entity with the intent to influence public opinion, especially on a political and ideological level, to benefit one side, and often discredit another. The aim is to persuade, rather than inform, with information, opinions, ideas of only one part. Language is loaded and sensational and facts may be hidden, because of the willingness to emphasize only a part. Propaganda is mainly linked to governments, but it exists in all fields, in organizations, media, activist groups (Tandoc et al., 2017). Moreover, fake news or misinformation in the form of propaganda have the capability to polarize public opinion because they divide the audience and promote extremisms; they can reduce trust and undermine democracies.

In 2016, two major events appear to have been influenced by fake news: Brexit in June and Donald Trump's election in November. The traditional objective journalism has been overwhelmed by the spread of lies and disinformation. In particular, during the US election campaign, fake news generated more engagement on Facebook than real news (Guo et al., 2019). Controversy often arises on social media and on this occasion Facebook is accused of having circulated fake news to make the Republican candidate win the presidential election. Additionally, Russian intelligence was caught red-handed buying advertisements to influence the campaign (Wells et al., 2019).

Sometimes advertising and propaganda can be confusing as they overlap. They are both based on fact, but the propaganda includes biases that promote a particular perspective. There is a mixture of news and commentary as it tries to be perceived as objective news.

Hence, a large number of existing studies in the broader literature have examined the concept of the fake news. Based on the analyzed definitions, we identified the following dimensions of the fake news concept (see Table 1.2).

Table 1.2 Fake news' dimensions

Dimension	**Quote**
Anonymous source	Berghel (2017)
Association with (fake or self-proclaimed) experts	De Regt et al. (2019)
Capacity to defame	Berghel (2017)
Emotional appeal	Farhall et al. (2019) Pasławska and Popielska-Borys (2018) Paschen (2019) Bakir and McStay (2017) Alba-Juez and Mackenzie (2019)
Fabricated	Visentin et al. (2019) Mills et al. (2019) Chen and Cheng (2020) Pennycook et al. (2018)
Intention of deliberately disinform	Waisbord (2018) Paschen (2019)
Intentionally deception	Rini (2017)
Intentionally false	Allcott and Gentzkow (2017) Visentin et al. (2019) Mills et al. (2019) Tandoc et al. (2017)
Misleading by design	Gelfert (2018)
Online trust generation in the source	Talward et al. (2019)
Promotion of social accepted image	De Regt et al. (2019)
Self-disclosure	Talward et al. (2019)
Use of celebrity influencers	De Regt et al. (2019)
Verifiably false	Allcott and Gentzkow (2017) Tandoc et al. (2017) Visentin et al. (2019)
Virality	Bovet and Makse (2019) Brummette et al. (2018) Nelson and Taneja (2018) Roozenbeek and Van Der Linden (2019) Tandoc et al. (2018)
Wholly false	Bakir and McStay (2017)

Source: Author's elaboration

Therefore, on the basis of these dimensions identified by the analysis of the definitions of fake news, we propose a taxonomy of three clusters of dimensions (Tab. 1.3).

Table 1.3 Clusters of fake news' dimensions

Content	Fabricated content	Alarmist news
		Anonymity of the source
	Promotion of social accepted image	Desirability and association to specific social "peer" groups
	Association with (fake or self-proclaimed) experts	Presentation of contrarian views as valid alternative to scientific consensus
	Selectively using and omitting facts	Selectively picking specific information and utilizing facts out of their context
	Online trust generation in the source	High level of trust pushes users to take risks in sharing information
	Self-disclosure	
Form	Misleading by design	Use of misleading images and language
	Emotional appeal	Ability to arouse anger, fear, etc.
	Use of celebrity influencers	Communications appear to be from independent third parties
Intentions of source	Economic intentions	Clickbait
	Ideological intentions	Propaganda
	Status of manipulators	Likes, shares and comments

Source: Our elaboration

Association with (fake or self-proclaimed) experts

Associating with fake or self-proclaimed experts is a tactic recognized in the literature (De Regt et al., 2019) as effective in strengthening the credibility of the content presented and consequently increasing the spread of fake news. Widespread contrary theories and views are perpetuated by individuals who pretend to be experts in a particular field and represent a valid

alternative to scientific consensus. The consequence is the generation of confusion: the idea that scientific consensus is non-existent or that the accumulated evidence is not based on solid science is thus reinforced. Usually, pseudo-experts may already be in a position of power or gain notoriety and influence through excessive media coverage, such as politicians.

Promotion of socially accepted images

Among the other dimensions identified in the literature, De Regt et al. (2019) talk about the use of rhetorical arguments, often built around errors in logical reasoning that exploit emotional triggers. The rhetorical arguments are indeed a widespread strategy among deniers who aim to convey their points of view (Hoofnagel & Hoofnagel, 2007). The same approach is observed when marketers create campaigns aimed at promoting a socially accepted image by exploiting the idea that individuals should follow public consensus when making decisions. This dimension is easily understood in the assumption proposed by De Regt et al. (2019): "X amount of people / brand users think this product is great - this is proof that you should think it's great too".

Use of celebrity influencers

In today's society, celebrities play a key role in consumer decision making. Due to their fame, celebrities are considered "authorities" in certain industries (Holmes and Redmond, 2012). This celebrity trait combined with the spread of denial tactics can create a dangerous environment that favors the spread of fake news (De Regt et al., 2019). Indeed, when marketing communications come from independent third parties, while in reality they come from celebrity influencers and paid ambassadors, fake news spreads easily.

Selectively using and omitting facts

According to De Regt et al. (2019), ignoring or blatantly reshaping the existing body of scientific knowledge is a tactic that is currently used to spread fake news. For example, one way to dismiss information is to label it as a conspiracy theory, followed by the denigration of established experts and researchers who produced the evidence of the message's content. The goal of this tactic is therefore to question the motivations of researchers or experts. Furthermore, the weight of scientific discoveries is minimized by selectively selecting specific information and using facts outside their scientific context.

Online trust

Trust is another key dimension of fake news as it refers to the willingness to believe someone based on positive expectations of their behavior. On social media, trust comes from an exchange of useful information: a high level of trust pushes users to take risks in sharing information. However, as Talwar et al. (2019), trust has not yet been examined in the context of fake news sharing behavior.

Self-disclosure

Self-disclosure is about sharing personal information with others and is usually motivated by the desire to strengthen bonds in a particular social group, including online. Consequently, the need for popularity has also been identified as the driving force behind online self-disclosure. Social media users will then be able to share exciting and sensational news, without any concern that it is fake news (Talwar et al., 2019).

Fabricated content

The "fabricated" dimension relating to fake news emerges from various research streams in literature, such as in management (Mills et al., 2019; Visentin et al., 2019) or in political communication (Allcott and Gentzkow, 2017). The fabricated content of fake news emerges especially when the authors do not act in good faith but pursue economic and political purposes (Allcott and Gentzkow, 2017). The more fake news that is credible, fabricated and interesting, the more the reader will be willing to share it and therefore the greater the revenue for producers. According to Tandoc et al. (2018), this type of information has no factual basis; however, fake news is presented or published in the style of real news to create legitimacy, and are often believed to be a reliable source because partisan organizations often present information with some neutrality.

Misleading by design

Gelfert (2018) states that in order for a claim presented as news to be considered a false news instance, it must not only be misleading simpliciter, but misleading by design. According to the author, the elements that make fake news an interesting phenomenon to study are precisely the set of characteristics of this type of news and the logics that are the basis of their design and that guarantee their diffusion. The dimension "misleading by design" is explained in

relation to the systemic characteristics of the process production and dissemination of news. Indeed, not all false or misleading claims are cases of fake news. Advertising, for example, can systematically misrepresent the facts by exaggerating the benefits of a particular product or service. The same goes for chronically sloppy journalism, which can result in a large number of false or misleading claims presented as news, but which does not in itself qualify as fake news (Gelfert, 2018).

The misleading by design dimension is also related to the use of images as a fake news feature. Indeed, scholars such as Khaldarova and Pantti (2016) studied the narrative of Russian television in the crisis of Ukraine and the counter-narrative offered by the website Stopfake.org which tried to counter the misinformation and the exposure of misleading images about Ukraine. According to the authors, fake news takes the form of propaganda using scandalous material, such as complaints, dramatic music and misleading images taken out of the context. StopFake was launched in 2014 in Kiev as a crowdsourcing project to fight disinformation coming mainly from the Russian media and the Internet. The project was conceive by young journalists helped by more experienced professionals of the information sector. According to Khaldarova and Pantti (2016), one of the methods of unmasking fake news is the use of a counter-narrative which offers proof that the images of fake news is manipulated, fabricated or taken out of context with the meant to reinforce a false message. For this reason, the concept of image verification is at the center of the academic debate on fake news, especially in the digital environment, where different images are not what they pretended to be. “For instance, a photo depicting a long shallow ditch full of dead bodies, reported on Channel One as civilians killed by the Ukrainian army, was discovered by StopFake to pre-date the current conflict by nearly two decades. To prove this, StopFake published the original image, showing a Russian soldier standing over the mass graves of civilians in Chechnya in 1995 during Russia’s own battle with separatists in the contested North Caucasus republic. For the sake of Channel One’s argument, the soldier was cropped out and the image was reframed as a result of a Ukrainian army attack” (Khaldarova and Pantti, 2016, p. 10).

Emotion appeal

The emotional appeal of fake news has its roots in academic studies on fake news (Horne and Adali, 2017; Paschen, 2019). For example, Horne and Adali (2017) analyzed the psychological characteristics aroused by real, false and satirical news. According to the authors, fake news is shorter and simpler than real news and its content is repetitive. As for emotions, the study revealed that in relation to fake news, negative emotions are stronger than in real news. The same research also highlights a strong dissimilarity between the title and the body of the text of fake news and suggest that the title and body should be analyzed separately in future research.

Indeed, several studies in the literature have emotional appeal is a key feature to distinguish fake news from real ones (Bessi et al., 2015; Chen et al., 2015; Horne & Adali, 2017). Paschen (2019), notes a knowledge gap in the literature related to if and how specific emotions differ between fake news and real news. For this, the author tried to understand "how valence of the general feeling and the specific emotions displayed in the headlines differ from the real ones e manufactured news articles". The author has empirically shown that fake news headlines are significantly more emotional and less neutral in sentiment compared to the titles of actual new articles, confirming previous studies by Horne et al. (2018). The theoretical anchorage identified by the author is in Marketing studies, and in particular in the division between marketing and business communication strategies, rations and strategies that leverage emotions (Dens & Pelsmacker, 2010): the emotional framing aims in fact to evoke emotions in consumers through adequate terminology aware of the little time that consumers devote to reading the contents. Indeed, other studies show that most of the contents on social media are never clicked, but users only read the headlines (Wang et al., 2016). "This suggests that the titles can serve as files important mechanism for fake news through public persuasion strong emotional calls" (Paschen, 2019, p. 18). The latest key finding from Paschen's (2019) study reveals that negative emotions are much more prominent in fabricated news than in actual news, both in the title of the article and the body of the text. Paschen notes that emotions such as anger and disgust are displayed more frequently in fake news than positive emotions such as joy. The same results can be found in the communication literature (Dens et al., 2008), which highlights how surprising, shocking content can improve users' attention and facilitate the dissemination of messages.

Intentions of source

The results of the systematic review on the topic of fake news have allowed us to identify the reasons behind the dissemination of fake content on the Internet. In particular, we have classified the intentions of the source into three macro-categories, i.e. ideological, economic and related to the status of the individual or organization that promotes and disseminates fake news. In the following paragraphs we go into the details about each type of motivation with the aim of understanding its mechanisms.

The purpose of some news' manipulators is to make money from advertising. Indeed, social media and web portals exploit the 'pay for click' mechanism and ensure that users can earn money through the dissemination of content that generates a very high engagement in the reference community. Since the publishing oligopoly ceased at the beginning of the 2000s with the advent of the Web and through the diffusion of user-generated-contents (UGC), more streamlined structures and often freed from legal or business conditions have started spreading fake content on the Net with the aim of earning money. Realistic content, languages of appeal for users and imitation of already existing website domains facilitate this phenomenon. The case of 'Fattoquotidaino' is well known, which spread thanks to the resemblance to the Italian newspaper 'Il Fatto Quotidiano', and publishing unsubstantiated news and far from the truth together with current news to maintain high credibility of the newspaper. The attractiveness of certain contents, titles or images that accompany the article are elements that leverage the user's cognitive ability and therefore allow fake news to become viral.

Furthermore, there are numerous cases of political organizations which spread fake news for propaganda reasons. For instance, a USA Senate analysis of the so-called "Russiagate" concluded that Instagram played a key role in the manipulation of American voters' opinion in 2016 by Russian trolls. The IRA (Russian Internet research agency) would have disseminated contents with the aim of generating confusion about political and social conflicts in the United States by disseminating often false information and focusing on highly divisive issues in view of the presidential elections that led Donald Trump to the victory. The Russian trolls have therefore managed to gain more audience engagement and participation on Instagram than on any other social media platform, including Facebook. The contents posted by the IRA on social media have fueled heated debates with the aim of strengthening the

consensus towards Donald Trump and weakening the position of Hillary Clinton, through very sophisticated techniques.

Among the various reasons that push manipulators to spread fake news, there is also the possibility of increasing their status on the Net and therefore being accepted more favorably by the virtual community. In particular, on social media such as Facebook and Twitter, the status grows the more likes, shares and comments you have on your page. The disseminated contents will therefore have a greater virality in groups of friends and followers and this also happens in anonymous communities which are accessed with nicknames. Users may also have the impression of having greater control over institutions, and authoritative sources in general, seeing their content that has gone viral. Finally, other users could be pushed to manipulate content simply to have fun spreading chaos: this is the case of trolls who have a difficult relationship with traditional media and who often choose the targets of newspapers as victims. These users often share content that is racist, sexist or that generates feelings such as anger and amazement and claim to do so only to generate chaos on the Internet.

1.3.3 Fake news' spreading on social media

This study has shown that fake news, in addition to having certain characteristics and dimensions, becomes viral and are more "successful" on the Internet when these contents resort to a series of strategies and models of propagation. Specifically, this concerns the form of fake news, the content and methods of dissemination. The aim of this paragraph is to review the models of propagation and dissemination of fake news found in literature, with specific focus on the variables underlying these models.

Social media can be interpreted as a variety of digital sources of information that are created, initiated, disseminated and consumed by Internet users to inform each other about products, brands, services, personalities and problems (Saji et al., 2013). Companies are now aware of the imminent need to focus on developing bilateral personal relationships with consumers and fostering interactions (Bernoff & Li, 2008). Social media offers new ways for businesses and consumers to interact with each other. Consequently, the social communication created by the company is also considered an essential element of promotion (Mangold & Faulds, 2009).

Marketing managers expect communication on social media to engage consumers and be fair, influence product perception and promote information disclosure (Brodie et al., 2013). This popularity of social media communication among companies depends on the viral dissemination of information via the Internet and the greater ability to reach audiences than traditional media. Furthermore, Internet users are moving away from traditional media and increasingly use social media channels to seek information and opinions on brands and products (Mangold & Faulds, 2009). Consumers need immediate access, on demand, to information at their convenience. The Internet and the Web 2.0 have strengthened the proactive behavior of consumers in the information and purchase process (Burmann & Arnhold, 2008). In the information age, customers use social media to access their desired product and brand information.

Hence, the rise of social media has democratized content and made information sharing quicker via social and mobile channels (Fulgoni & Lipsman, 2017). Today, everyone can write anything and share it through their accounts because there are fewer and fewer barriers to entry and the density of communication and the speed of dissemination of ideas is improving with social networking sites that also allow users to connect. We are witnessing a phenomenon of 'digital word of mouth', one of the most powerful ways of communicating information from person to person and persuading others: word of mouth plays on the value of trust to influence how others think, feel, act, and this happened long before social media, but it has gotten better now. Individuals are able to publicly share experiences by posting, disseminating information across their social networks or creating groups in support of or against a cause or organization (Etter et al., 2019).

According to Fulgoni and Lipsman (2017), with the spread of the Internet as a means of communication and the emergence of social networks, users are not only influencing those in their immediate circle of friends and family; face-to-face interaction has expanded and thanks to social media there is the possibility of influencing on a much larger scale.

Consequently, the world of the social media has radically changed the paradigm of public discourse in Western democracies from a double point of view. On the one hand, it has favored the spread of alternative thinking and the so-called 'counter-information', also allowing the

development of innovative and dynamic forms of participatory democracy (Colombo, 2014); on the other hand, it has increased the spread of false information with serious harm to the economy and democracy (Howell, 2013). The network is for better or for worse one company to widespread power in the management of the dissemination of online content (Faletti, 2013) and this involves the risk that - more than any other means of communication, it causes the absence of controls typical of traditional media - the same network is able to pollute the public discourse by conveying false information, the so-called fake news or hoaxes. This negative aspect of the Internet and in particular of social media has contributed to a pollution of the public discourse, sometimes even resulting in a distortion of the mechanisms of democratic participation. As showed previously, the phenomenon of fake news is not a new phenomenon, but today it assumes a key relevance due to the development of social media, a tool that allows a greater diffusion of the same.

The spread of fake news on social media is related to a series of 'technical' and cognitive/sociological phenomena (Monti, 2019). The former is linked on the one hand to the ability of social networks to reach unilaterally certain users and, on the other hand, the problem of the so-called virality. In particular, the ability of a content to become viral through shares that increase exponentially, due to countless users that every single share reaches, is able to render a content of global knowledge in a few hours (Howell, 2015). The sociological-cognitive problems correspond instead to some phenomenon such as the 'social cascade', that is the cascade dissemination of information, which increases its diffusion without ascertaining its veracity; the 'group polarization', that is the polarization of groups, which tends to favor the dissemination and strengthening of beliefs within homogeneous groups; and the influence of prior convictions (personal beliefs) on the reading of news (Mocanu et al., 2015). To these characteristics it seems necessary to add a general collective credulity in relation to online contents.

The spread of fake news has not found an effective response from the marketplace of ideas. The debunking attempts seem destined to clash with a production numerically unbearable of hoaxes, also certainly thanks to the aforementioned collective credulity which contributes to the spread of even the most improbable 'bullshit', denied by simple research on network (Monti, 2015). Waiting for the formation of a social 'critical conscience' with respect to the

contents disseminated online it would seem essential to develop forms of regulation of social networks that are able to prevent the serious pollution risks of the public discourse linked to the spread of fake news about the same.

Moreover, there are also several techniques identified by scholars allowing the dissemination of fake news. Fake news often goes viral on social media thanks to the bots that are used for this purpose. Bots are non-human accounts that mimic and automate certain online behaviors (Al-Rawi et al., 2018; Jones, 2019). According to a research from the University of Indiana published in Nature Communications (Shao et al., 2018), bots played a primary role in spreading disinformation on Twitter during the 2016 US presidential elections. For this research, 14 million messages and 400,000 shared articles were analyzed on social media between 2016 and 2017. The study revealed that 6% of Twitter accounts identified as bots spread 31% of fake news. Furthermore, the bots would be responsible for 34% of all articles published by non-credible sources.

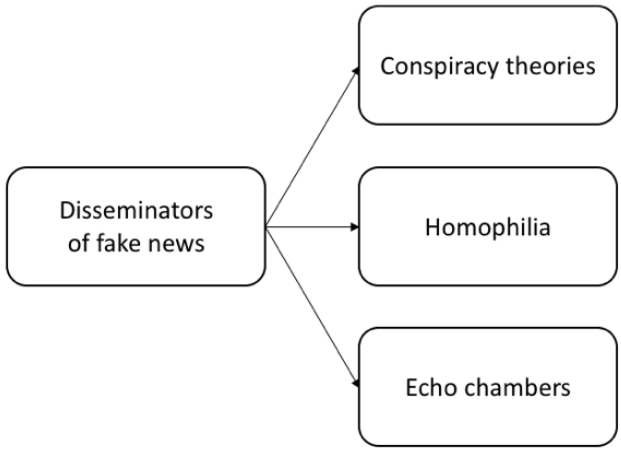
The contrast to the spread of fake news produced by bots is really challenging due to the speed with which these accounts produce and disseminate fake news. According to scholars, the duration of the production would range from 2 to 10 seconds and their success is due to the attitude of users to pay more attention to news already popular in their community. The bots, in fact, manage to increase the volume and visibility of a message until it is more likely to be shared widely. In addition to Twitter, Snapchat and WhatsApp could also be affected by bots that produce fake news.

In addition to bots, the meme is also a content type that spreads on social media and in general on the Net, that is a piece of culture, typically a joke, which gains influence through online transmission (Davison, 2012). Memes are then shared by multiple users and gradually becomes a social phenomenon that spreads on the web (Shifman, 2013). In the language of social media, meme means a visual content that is shared and alternated in meaning by users as its virality increases. These images are therefore often linked to propaganda precisely because they are disseminated with an ideological purpose by political or other organizations. The aim of memes is therefore often to transfer political thoughts that are shared on social

media: the contents are often racist or false and the intent is to provoke users so as to increase their diffusion (Marwick & Lewis, 2017).

Furthermore, this systematic review has shown that there are various theoretical constructs that underlie the literature on fake news disseminators. We identified three macro-phenomena considered by scholars as disseminators of fake news: conspiracy theories, homophilia and echo chambers (see Fig. 1.6).

Fig. 1.6 Disseminators of fake news



Source: Author's elaboration

Conspiracy theories

In their study, Allcott and Gentzkow (2017) refer to conspiracy theories, which are, by definition, difficult to verify as true or false, and they are typically originated by people who believe them to be true. This phenomenon of conspiracy theories, according to the authors, is also closely linked to the concepts of trust and confidence in the mass media. Accordingly, the declining trust in mainstream media could be both a cause and a consequence of fake news gaining more traction.

The conspiracy theorists, in fact, can publish their thoughts on the Net and publicly justify the theories they believe in without there being a filter or barriers to entry (Sunstein & Vermeule, 2009). Some theories, such as the anti-Semitism example, have ideological roots; while others arise from feelings such as mistrust and lack of credibility towards authorities such as

politicians or the media; still other theories focus on specific events such as the September 9th attack. According to most of these theories, there are unknown and hidden power groups that manipulate the political, social and economic aspects of all individuals. Even if they have ancient origins, conspiracy theories spread much more quickly and easily on the net and contribute to the proliferation of fake contents that pollute the Net.

According to some scholars (Dagnall et al., 2015), at the base of the spread of conspiracy theories there are the anxiety of control loss within society or in a certain environment such as the political one. While among the elements contributing to the spread of these theories, literature has identified paranoia, inconsistent mentality and misconceptions that originate in traditions handed down over the centuries (Jolley & Douglas, 2014). On the other hand, according to other research streams, conspiracy theories are spreading trivially because people on the Internet are more exposed to this content and therefore tend to be more likely to believe these claims (Byford, 2011).

Homophilia

Analyzing several fake news studies, a theoretical construct concerning the 'selective exposure' clearly emerges from the literature: fake news is spread mainly in an ideological context or in cyber-ghettos (Lewandowsky et al., 2012) because users 'selectively share' news, including fake news, in line with their opinions or what they already believe (Guess et al., 2019; Grinberg et al., 2019). This is why we speak of ideological homophilia, which is given by the phenomenon according to which users tend to view content that is mostly congenial (Bakshy et al., 2015), this is probably also true for fake news. Real "ideologically clear alliances would then be formed on the Net which will have a greater chance of seeing ideologically congruent fake news in their feed" (Tsfati et al., 2020, p. 160). Users will therefore be more likely to select and read these fake news (Bakshy et al., 2015; Grinberg et al., 2019). It should be noted, however, that other studies point out that cyber ghettos may not be as widespread as most fake news studies claim without empirical data on the subject (Bruns, 2019; Zuiderveen Borgesius et al., 2016).

Echo chambers

Moreover, in the process of spreading fake news on social media, 'echo chambers' play a leading role. The echo chambers are spaces in which people find ideas and thoughts that do not diverge from their own (Colleoni et al., 2014; Stroud, 2010) - this happens above all with regard to politics but not only. According to Mutz and Martin (2001), people prefer content that reinforces biased sources over those that include different voices and for this reason social media and virtual spaces in general often act as echo chambers for users.

Quattrociocchi and Vicini (2016) states that the echo chambers are closed circuits, virtual worlds created to measure by each individual. In fact, there are no people who are not part of an echo chamber. According to the scholar, there are different types of echo chamber, for example of a scientific, political, cultural nature, or of a conspiratorial and extremist matrix. Yet the mechanism that allows these echo rooms to work is always the same, and is based on confirmatory bias. These echo chambers therefore facilitate the dissemination of fake news and misleading news on social networks. In fact, users tend not to verify the sources they consult online and the truthfulness of these news contributes to the media exposure of these false news, helping to further consolidate ideas that do not always have a scientific or truthful basis. The other important factor in the spread of fake news through echo chambers is their breadth and ability to involve different users and topics: the larger the echo chamber, the easier it will be for the fake news to become viral and be shared by users.

The consequence of the echo chambers phenomenon concerns the isolation of the users who are part of it. These closed spaces trigger mechanisms according to which users will no longer pay attention to information and content coming from the outside and therefore will avoid confrontation with other types of sources. Consequently, it is also more difficult to unmask the fake news shared in the echo chambers.

The fact that in these spaces, users hear about fake news but do not see their original publication, according to Tsfati et al. (2020), implies that the mainstream media is responsible for much of the spread of fake news. While estimates of exposure to fake news in traditional media are not available, coverage of this fake news is likely to happen by the mainstream media, a significant amplifier and disseminator of false stories. Although, for most mainstream

media, the goal is to cover up fake news with the intent to set the record straight and correct fabricated information (Al-Rawi, 2018).
Finally, in these virtual spaces such as echo chambers or cyber-ghettos, emotions play a key role. Cockcroft et al. have distinguished "the emotion that tends to distort the truth of our perceptions from that which illuminates and deepens our understanding of it" (2014, p. 85). This topic was studied also by Paschen (2019) who in a brand communications study investigates the emotional appeal of fake news using artificial intelligence and human contributions. According to the author, an emotional appeal in message could be more effective in persuading consumers against a rational message, 'fake news title are significantly more "emotional" and less neutral in sentiment than titles of real new articles' (Paschen 2019, p. 7).

The research stream with a focus on the role of emotions regarding the spread of fake news is broad. This has been successfully established as described by Pasławska and Popielska-Borys (2018). As a result, fake news operates on an emotional or affective process identified with a cognitive error. Emotions like fear, desire and fantasy play an important role in the dissemination of this news especially on social media. Furthermore, the emotions dimension contributes to the elaboration of the 'discourse of fake news' (Farhall et al., 2019) used by politicians such as Trump to attack and discredit the media and rivals. Fake news, in fact, has a strong impact on the media ecosystem (Brumette et al., 2018) and significantly reduce trust in the media (Van Duyn & Collier, 2018) which results in a disinformed society.

1.4 Fake news' effects

The findings of this systematic review highlight the outcomes of the fake news spreading phenomenon. On the one hand, fake news contributes to the disinformation on social media platforms and Internet in general; on the other hand, companies have to defend themselves from fake news, as they represent a threat on online spaces.

1.4.1 Disinformation phenomenon

The literature has shown that fake news has become a danger that concerns democracy. Due to the multiplication of information and the media that broadcast the news, social media has made the news selection and verification process that the journalist conducted in the past more complicated. The threat of fake news lies precisely in the huge amount of news that circulate on the net today and that have a similarity with real news.

Fake news is often spread to destabilize a virtual environment and make it known how easy it is to bypass press controls. For these reasons, in recent years new professional figures have emerged such as the debunker who has the task of monitoring the infosphere, discovering false news and implementing policies to combat the spread of these false contents.

The fake news that generate disinformation in the virtual environment are of a different nature. For example, during the recent Covid-19 pandemic, according to the European Commission (2020), we have witnessed a massive spread of fake news that have undermined the relationship between authorities, European and national institutions and their credibility on the part of citizens.

To combat disinformation, according to the literature, it is necessary to mobilize stakeholders (for example online platforms, search engines, public authorities) and to support those who check news and content before publishing them on the Internet. disinformation should therefore be based on understanding, cooperation and transparency ensuring the freedom of expression and pluralism.

Information contents such as videos, texts and images, in fact, spread among users through mass communication which are currently an integral part of the media system and which therefore include both forms of offline communication and online platforms. The current media system, therefore, is a complex system characterized by a myriad of touchpoints and channels in which the boundaries between education, entertainment and information are not always identifiable. Especially in the current scenario, therefore, the connotation assumed by the information system is now global and is characterized by a clear power of the media that connotes a certain concern for the cultural models that these media are able to disseminate and for the ways in which the public recognizes these patterns.

Hence, the role of intermediation comes into play, which is a peculiarity common to the classical media. These means, in fact, a mediation by professionals who preliminarily screen the contents and news and who subsequently make them available to people in a clear and easily understandable way by all. Journalists and information professionals in general therefore play a key role in that they return information and news to society accompanied by analyzes and comments that can interpret reality, news and current phenomena through a critical reading (Marwick & Lewis, 2017).

With the spread of social media these dynamics have vanished and the Internet has given birth to a system based on disintermediation. Anyone can produce information and content, true or false, insert them on their social pages and disseminate them on the Net. Anyone can express their thoughts and opinions on specific issues without necessarily having the appropriate skills, knowing their language and characteristics. A structural change is therefore underway that has affected the information system: the barriers to entry have disappeared, disintermediation is the new paradigm that characterizes the dissemination of online content (Fallis, 2015) and professionals have lost their authority.

Furthermore, in recent years the platforms through which users can convey their messages and share content in different formats have been multiplying rapidly. These platforms are increasingly easier to use for users and do not require special and in-depth computer skills. At the same time, and also due to the recent pandemic linked to the spread of Covid-19, the number of users connected to social media is constantly increasing. On these virtual places, users read and share content from other users and generate their own content (UGC). This phenomenon is observable in social networks but also in other spaces where users can share content and interact with other users, such as forums, blogs, websites. The new media have therefore expanded the boundaries of information, which in a few decades have assumed the connotation of ‘mass media’, helping to increase the large amount of information and data shared daily by the information system (Marwick & Lewis, 2017).

In conclusion, with the advent of the Internet, and especially with the diffusion of social media in our society, the spread of content such as fake news has increased exponentially. In this

scenario, disintermediation represented by the absence of filters of information professionals favors the spread of fake news.

1.4.2 Corporate risks

Today, fake news has invaded almost every field, managers have understood the danger that comes to their business from the spread of fake news and have begun to study and implement tactics to combat the dissemination of this content. Indeed, fake news could undermine the relationship of trust between consumer and business with serious damage to companies.

According to Risk Management 360, a digital mentality is needed to counter the phenomenon and therefore safeguard the corporate reputation from fake news. A process consisting of three basic steps should therefore be followed: (1) identifying fake news in real time in any digital space; (2) analyze and classify fake news on the basis of degree and truthfulness; (3) counteract fake news in their spaces of existence through operations such as elimination, modification, de-indexing, if possible, or argumentative insertion.

According to Obada (2019), the relationship between fake news and brands is complicated. Indeed, Fulgoni and Lipsman (2017) argue that brands can lose the control over their communication strategy, as the brands can interact both directly and indirectly with fake news. First, brands can interact directly with fake news by becoming victims or purveyors; second, brands can interact indirectly with fake news because they can be linked by transferring images to either where fake news contaminates brands (Berthon et al. 2018). As a matter of fact, Visentin et al. (2019) demonstrate empirically the fake news consequences to the brand advertised alongside the fake news. According to this study, consumer purchase intentions and word-of-mouth also suffer from the impact of fake news circulating on the Internet. Thus, this phenomenon has significant implications both for marketing strategies and corporate reputation (Fulgoni & Lipsman 2017).

In the following paragraph the Management literature which has studied fake news and their relationship with companies is analyzed in depth.

1.5 Fake news in Management literature

The Management literature has begun to address the issue of fake news in relation to business activities in recent years, focusing on the impacts of fake news on different aspects of the company. Di Domenico and Visentin (2020) in their review of 86 interdisciplinary scientific papers identify a research gap of the fake news and problematic information in marketing studies. Accordingly, the management literature still lacks in providing explanation of fake news on social media and their effects in terms of marketing strategy. In their review, Di Domenico and Visentin (2020) found 13 Marketing studies considering the time frame of 2017-2020: 10 articles cover the brand perspective and 3 studies are related to the consumer.

The aim of this paragraph is to review the management studies that have addressed this issue: in paragraph 4.4.1 the focus is on the theoretical underpinning of Management studies on fake news; paragraph 4.4.2 is dedicated to experiments and empirical studies on fake news in relation to company activities.

1.5.1 The theoretical underpinnings

According to the research stream developed in the Management field, fake news studies can be categorized into three different paradigms, i.e. source-based, context-based and content-based studies (Paschen, 2019).

Source-based fake news studies focus on identifying the false by considering the source spreading the news. For these research objectives, some scholars such as Baly et al. (2018) have used machine learning tools or have proposed predicting the reliability of the communities that promote this news (Mukherjee & Weikum, 2015). This model focuses on source reliability and how it interacts with content credibility and user experience.

Context-based fake news studies focus on understanding the dynamics of fake news' dissemination and the recipient of the content. Also in this research stream several models have been proposed: Kwon and Barone (2020) examined the temporal, structural and linguistic aspects of the diffusion of fake news on the Net. While, Del Vicario et al. (2016) conducted a

study to understand the mechanisms underlying the spread of disinformation on Facebook, using quantitative research methodologies. Vosoughi et al. (2018) studied fake news on Twitter and found that these contents go viral when they are able to arouse different emotions, such as surprise and disgust, instead of emotions like sadness and trust which could arouse real news.

Content-based fake news' studies focus on the content - textual or visual - of fake news. Paschen identifies two subfields within this research line: (1) knowledge-based or "fact-checking" studies, such as Etzioni et al. (2008) who use a tool to extract factual claims, compare them with facts retrieved from the Web, and report discrepancies. In the same research subfield, Magdy and Wanas (2010) proposed a statistical model that checks factual statements from a given text and determines how often they are supported by facts retrieved from the Web. However, information found on the Web is not always truthful and for this reason news verification studies have raised many doubts in the literature (Potthast et al., 2017). The second subfield of content studies is defined by Paschen (2018) as style-based. The focus is "on modeling the degree of faking and its manifestation in a given text assuming that deception has its own style" (p. 10). The research therefore focused on textual characteristics, such as semantics and syntax. For example, the study by Chen et al. (2015) examines methods for automatically detecting clickbait content as a form of deception, analyzing both textual (i.e. semantics and syntax) and non-textual (i.e. images) content elements. The study concluded that certain linguistic patterns, such as the use of a suspenseful language, a reverse narrative style, a certain image placement can influence reader behavior. To arrive at these conclusions, Chen et al. (2015) considered the emotional characteristics derived from their analysis of the text, for example through sentiment analysis. Among the other studies that fall within this research subfield, Horne and Adali (2017) analyzed a complete set of stylistic characteristics of fake news, concluding that they use shorter, simpler and more repetitive content, as well as strongly negative emotions, i.e. fear, anger, anguish. Furthermore, according to Horne and Adali (2017) the stylistic characteristics of fake news differ between the title and the body of the news text: they should therefore be studied separately. Paschen (2018) concludes that the content of true and false news is different than the emotions depicted in it.

1.5.2 Fake news' studies and brand

Few studies have focused on fake news from a brand-consumer perspective; instead, several scholars have largely focused on political problems (Berthon & Pitt, 2018; Chen & Cheng, 2020; Tiago et al., 2020; Visentin et al., 2019). Tiago et al. (2020) argue that research of fake news from brand perspective is needed for two motivations: (1) the boundaries between user and marketing content are not always visible on social media and consumers are now brand co-creators; and (2) because post-information such as comments, online reviews can be considered as an element that affects the brand reputation.

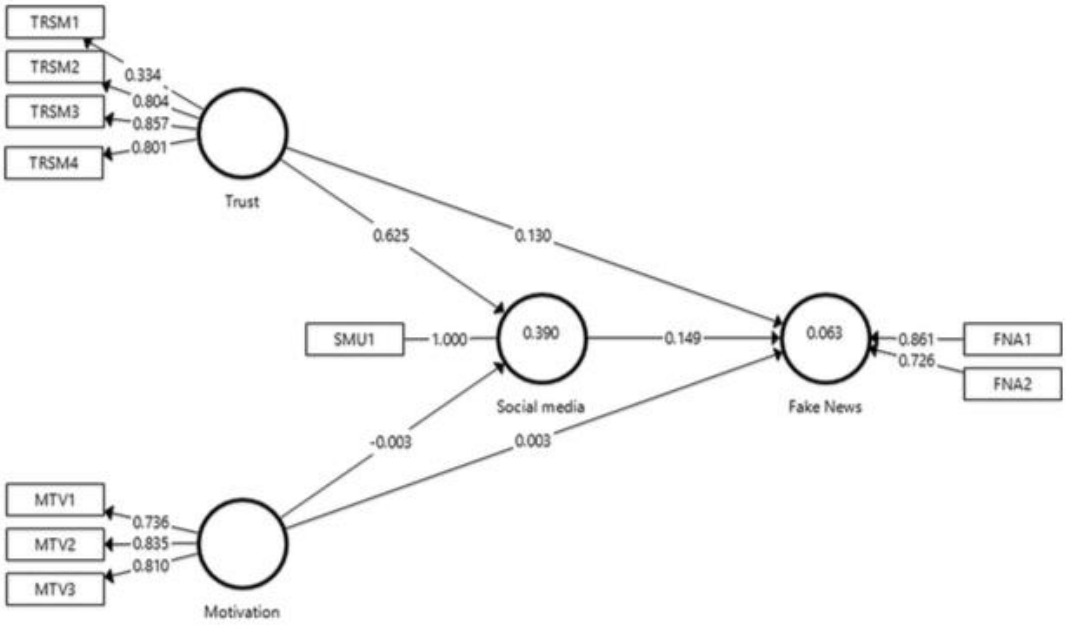
Therefore, in recent years a series of studies have been published that link the phenomenon of fake news and brands. For example, Tiago et al. (2020) study's examines brands' vulnerability to fake news starting from the consideration that companies need to identify information sources likely to be trustworthy and promote positive consumer attitudes toward brands. With their study, they propose an estimation model (Tab. 1.4; Fig. 1.7) focusing on user's attitudes toward fake news among countries, age, education level and digital/IT skills. Tech-savvy users and users with more well-established digital social personas (i.e., younger) are more likely to recognize fake news and able to evaluate digital information sources. They are also confident in detecting these contents. Indeed, Pennycook and Rand (2018) argue that not all users are equally predisposed to be deceived by fake news, but all individuals are prosumers and they cocreate brand images through content creation with unverified information.

Tab. 1.4 Constructs of Tiago et al. (2020) model

	Construct and items
	Trust in digital media (Cronbach's α: .701; AVE: 0.534; rho_A:1.000)
TDM1	Online newspapers and news magazines
TDM1	Online social networks and messaging apps
TDM1	Online news aggregators
TDM1	Video hosting websites
	Motivation (Cronbach's α: .707; AVE: 0.632)
MTV1	Read or listen to what is shared by others
MTV2	Share things you found yourself
MTV3	Share things others have shared with you
	Social media (rho_A:1.000)
SMU1	Social media usage
	Fake news awareness (rho_A:1.000)
FNA1	Perception of contact with fake news and misleading information
FNA2	Ability to unveil fake news and misleading information

Source: Tiago et al. (2020)

Fig. 1.7 Estimation model of Tiago et al. (2020)



Source: Tiago et al. (2020)

In light of what emerged from the Tiago et al. (2020) study's, brands should take two actions: companies must create credible contents in digital spaces and must discover fake news which target their brands, also by using technologies such as bots.

Indeed, brands are among the most important assets that firms manage because they act as key identifiers for differentiating factors in consumer decision-making. Today, the brand value is not entirely under control of the company as brand value is co-created by the interactions with stakeholders. Fake news represents a threat in this scenario as they impact negatively the brand: for example, Apple shares fell 10% within few minutes in 2008 following a fake news about an health problem of Steve Jobs. In these cases, brands that activate crisis response strategies too late can suffer significant damage to brand value (Johar et al., 2010). Hence, "fake news crisis requires both a rethinking and expansion of brand response strategies" (Mills & Robson, 2020, p. 161). Storytelling, as it can be more persuasive than statistics or arguments (Braverman, 2008), represent an appropriate strategy for combating fake news spreading for two main reasons: brand story should be perceived as authentic and must arouse emotions, as users consider brand story in a deeper way than the claims and they are emotionally involved (Jameson, 2001; Mills & Robson, 2020). Indeed, if conceived according to the marketing principles and familiar for consumers, brand story can represent a key-strategy for the threat of fake news. As fake news is persuasive from the emotion point of view, brand storytelling strategy should match this emotional appeal by involving consumers. Brand stories that set the message through emotion can be influential on consumers' behaviors and feelings (Mills & Robson, 2020). In other words, in place to traditional crisis approaches, Mills and Robson (2020) propose the storytelling strategy as other strategies such as providing evidence-based denials are inadequate for fake news' crisis.

Indeed, brand managers should take preventative measures to make their brands more resilient to fake news. Scholars argue that brands continually evolve thanks to consumer interactions with the company (Peterson, 2020). Brands are therefore to be considered dynamic because interactions with customers are continuous and for this reason brand managers should consider them as processes and not as static elements. In Tab. 1.8, Peterson (2020) summarized the takeaways for companies operating in the era of fake news, and in particular the actions which brand managers should take to counter the spread of this phenomenon.

Tab. 1.8 Takeaways for brand managers

Step in the scientific method	Focal question for individuals	Takeaways for brand managers
1. Assess relevant knowledge	What is the news story saying? What do I know about this topic? Is the source really legitimate?	Provide a readable website Update it weekly (SMEs) Update it daily (corporations)
2. Develop a research question	Is this news story fake?	Monitor the infosphere Enlist all employees in monitoring for fake news
3. Acquiring data	What is the news' context? (Its history and meaning for others)	Maintain the history and meaning of wrong information on the brand's website
4. Analysis of data	Is the news a parody? What results come from image and fact-checking websites?	Maintain a list of the prominent satires and parodies featuring the brand on the brand website
5. Discussion	Why does the author think that? How does the author know that to be true? What are my biases that might lead me to believe or resist this news?	Hang out in tribal groups of the internet Maintain a media relations staff to field inquiries about the brand and news/ discussion related to the brand

Source: Peterson (2020)

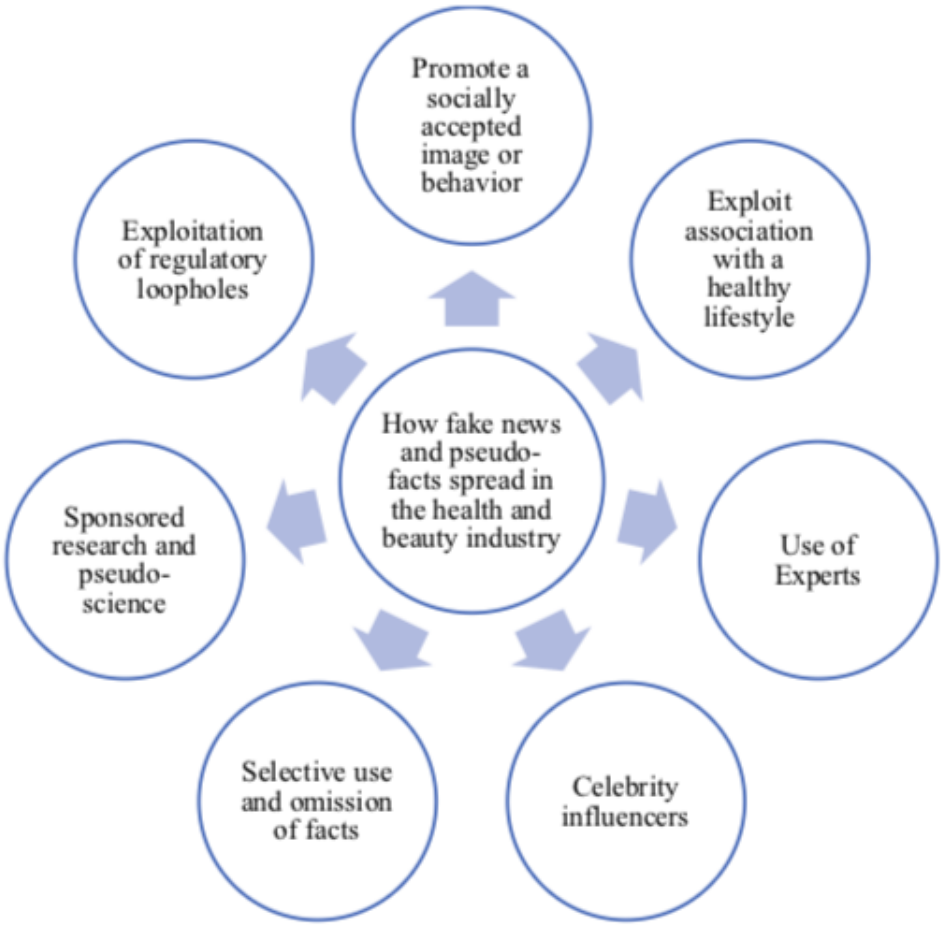
Thus, according to Peterson (2020), managers should be sure that (1) the firm's website is readable to all; (2) for small and medium enterprises the website should be updated weekly and (3) for large enterprises the website should be updated every day; (4) companies should also monitor the infosphere to identify fake news about their brand. For this action, (5) all employees should be involved to scan fake news. Moreover, (6) brand managers should keep the history and the meaning of these wrong information on the firm's website by specifying their refusing of these news. (7) Companies should also maintain visible in their website a list of prominent satires and parodies featuring the brand. Finally, (8) the media relations office of the companies should maintain strong relationships with journalists and blogger to answer questions about their brand and related news.

Hence, brands must equip themselves to oppose this phenomenon, also considering that has been found in the literature that while people would need to think analytically when discerning between fake and real news, most people don't: susceptibility to fake news is driven by lazy thinking. Authors such as Bronstein et al. (2019) showed that analytical cognitive style may partially explain people's increased willingness to believe fake news. For businesses this implies that professionals of marketing cannot rely on consumers to think carefully about the claims pro and against the brand. In most cases, users will simply be too lazy to do an accurate

analysis of the messages to which they are exposed and simply believe what they see or hear without delving into the news.

Furthermore, among the fake news' studies in Management literature, the De Regt et al. (2019) study, by adopting denials as a broader conceptual lens, proposes a framework explaining the propagation of fake news in health and beauty industry through seven marketing tactics (fig. 1.8).

Fig. 1.8 Fake news propagation framework



Source: De Regt et al. (2019)

1.6 Highlights and remarks

The aim of the first chapter of this PhD thesis is to identify and evaluate existing studies on the topic of fake news to provide an appropriate systematic review about this phenomenon. To achieve this aim, this study adopted an interdisciplinary perspective by considering different research streams, i.e. information technology, media studies, political science, psychology and management studies. Particularly, after reviewing the main definitions of fake news widespread in the academic literature (e.g., Lazer et al., 2018) identifying and categorized the dimensions of fake news, i.e. content, form and intentions of the source, this study focused on the Management area and specifically on the studies of Corporate Communication and Marketing Management which investigated the phenomenon, both from a conceptual and an empirical perspective. In this respect, recent studies have highlighted the need for more research on fake news in the area of Marketing Communications (Di Domenico & Visentin., 2020), in order to investigate the extent of the phenomenon and its impact on organizations (Visentin et al., 2019).

Starting from the causes behind the spread of fake news, from this study it emerged that the motivations driving the creation of fake news are economic and/or ideological ones (Allcott & Gentzkow, 2017). On the one hand, economic motivations push organizations to spread fake news with the aim of increasing traffic on a specific website by generating clicks; on the other hand, political organizations spread fake news for propaganda. Overall, this research found that fake news in literature are identified as fabricated and false. As for the form, fake news is misleading by design and has an emotional appeal. For example, title plays a crucial role in the spread of fake news: alarmist tones, a language capable of arousing strong emotions such as anger and fear facilitate the sharing of fake news. Paschen (2019), for example, investigates the emotional appeal of fake news concluding that could be more effective in persuading consumers against a rational message. Finally, the fake news' purpose is to go viral as they can in this way disinform users and intentionally deceive.

Indeed, as demonstrated by the analysis of the literature by Tandoc et al. (2018), fake news represents a serious danger to the media ecosystem and above all it threatens reliable journalistic information. In this scenario, social media that favor the formation of the 'echo

chamber' do not help users to compare different sources to verify the news. Social media repeatedly propose contents which the user already expects to read and which confirm his pre-existing beliefs (Colleoni et al., 2014). As a matter of fact, some psychological studies (Sindermann et al., 2020) have shown that, especially in the political sphere, fake news is consistent with pre-existing users attitudes.

Logically, the consequences of this phenomenon concern both the media ecosystem and companies. As for the companies, they could have reputational damages (Mills et al., 2019; Visentin et al., 2019) because of fake news about their products or services, and brands can lose the control over their communication strategy (Fulgoni & Lipsman, 2017), especially on social media channels (Statista, 2021). For these motivations, recently the Management literature began to deal with the phenomenon by developing a theoretical underpinning whose pillars are three types of studies, i.e. source-based, context-based and content-based studies or fake news (Paschen, 2019). Overall, these studies have shown that tech-savvy users and users with more established (i.e., younger) digital users are more likely to recognize fake news and value digital information sources. They are also confident in detecting this content. Indeed, Pennycook and Rand (2018) argue that not all users are equally prone to being deceived by fake news, but all individuals are prosumers and co-create branded images by creating content with unverified information.

Chapter 2.
The Role of Corporate Communication to Oppose the "Infodemic"[2]

2.1 Introduction

Digitalization as a key aspect that has allowed and contributed to creating disinformation is a topical concern among policy makers, organizations, scholars and institutions. As a matter of fact, according to some authors, digitalization allows fake news to propagate more rapidly than it ever has done before (Mills et al., 2019). Particularly, social media such as Facebook and Twitter have been blamed because of the fake news dissemination in virtual spaces (Jang & Kim, 2018; Spohr, 2017). This is due to their structure: on these platforms, content can be shared among users with no third-party filtering, fact-checking or editorial judgement (Allcott & Gentzkow, 2017), facilitating the fake news spreading.

Nowadays, in the current scenario of the post-Covid-19 pandemic, the use of digital channels to retrieve information has grown exponentially and, consequently, disinformation has spread more easily, so much so that the World Health Organization has coined the term "infodemic". For instance, according to a recent Statista study (2020), 60% of young people between the age of 16 and 24 have recently used social media for information on the Coronavirus, and 59% have found fake news on that topic. Indeed, the phenomenon of fake news affects not only society in general, but also organizations. In this context, digital corporate communication, understood as "the strategic management of digital technologies to improve communication in organizations, in society, and with organizational stakeholders for the maintenance of

[2] This chapter is the result of the following two academic publications:
(1) **Olivieri, M.**, Mäkelä, R. M., Romenti, S., & Luoma-aho, V. (Forthcoming, 2023). Digital corporate communication in the Covid-19 disinformation scenario: An analysis of social media management strategies. In Badham, M., Luoma-aho, V. (Eds). *Handbook of Digital Corporate Communication*, Edward Elgar Publishing, pp. 1-23. (ISBN: 9781802201956)
(2) **Olivieri, M.** (2022). La diffusione delle fake news in ambiente digitale: i rischi per le imprese e le strategie di contrasto. In Massara, F., & Polesana, M. (Eds). *Rapporto IULM 2022 sulla Comunicazione d'Impresa*, Franco Angeli, pp. 47-65. (ISBN: 9788835138419)

organizational intangible and tangible assets" (Badham & Luoma-aho, 2023, p. 1), could be compromised by the spread of fake news (Fulgoni & Lipsman, 2017). More specifically, scholars demonstrate that fake news influences consumers attitudes towards businesses (Di Domenico et al., 2021), conveying misleading beliefs (Lewandowsky et al., 2012), and create confusion on past experiences with brands (Rapp & Salovich, 2018). Other scholars have also found that corporate reputation could be strongly compromised by fake news (Berthon & Pitt, 2018) to the point of being subject to boycott of products for no reason (Obada, 2019).

Hence, the aim of this chapter is to address the topic of disinformation and explore the role of digital corporate communication to counter the spreading of this dangerous phenomenon for organizations, i.e. the European Union responses, during the Covid-19 pandemic.

The chapter is structured as follows. First, the focus of the next paragraph is on what is changing, i.e. the fake news spreading in the communicative overcrowding scenario. Second, the chapter identifies the narratives of Covid-19 disinformation, with a focus on these narratives diffused on social media platforms. Finally, the Covid-19 "infodemic" was analyzed by considering the response of the European Union to the vaccine disinformation campaigns. Highlights and remarks conclude the chapter.

2.2 What is changing

From the analysis of the literature conducted in the first chapter of this PhD thesis, it emerged that there are different types of fake news which consequently also have different objectives and contexts. For example, the intentions of the source change can be of two types (Allcott & Gentzkow, 2017): economic and/or ideological ones. On the one hand, economic reasons push organizations to spread fake news with the aim of increasing traffic on a specific website by generating clicks; on the other hand, political organizations spread fake news for propaganda purposes.

Generally, some elements of the fake news' definition are agreed upon among all academics: fake news is intentionally false but realistic information, fabricated with the intent to deceive and be taken for truth. It requires the look and feeling of real news in how websites look, how

articles are written, how photos include attribution. Hiding under a veneer of legitimacy, it takes on some form of credibility by trying to appear like real news.

Regardless of the form of fake news, however, these contents pose a threat to organizations and, consequently, to digital corporate communication strategies. Therefore, the focus of this paragraph is to analyze the current communication scenario and is mapping the risks of fake news for organizations.

2.2.1 Fake news in the communicative overcrowding scenario

It is now widely accepted that the moment of maximum dissemination of fake news must be attributed to the US election campaign of 2016 (Guess et al., 2018). These elections, in fact, were the first ones that saw a key role of social media as a vehicle to spread news and build consensus, reaching as many users as possible for politic purposes. This phenomenon has brought the attention to what is behind fake news – a series of analyzes and studies on this topic have been conducted from that moment to today. Frequently, in the case of a diffusion campaign of fake news, behind these contents there is the contribution of organizations capable of creating damage to people, such as political opponents, institutions, or companies. As a result, the world of social media is radically changing the paradigms of the information use: on the one hand, social media is favoring the spread of the so-called "counter-information" (Colombo, 2014); on the other hand, they are increasing the spread of false information (Howell, 2013).

As a matter of fact, with the rapid diffusion of social media, the phenomenon of disinformation has grown exponentially – according to a recent study by Statista (2020), among the sources of trustworthy news by medium, social media ranks last and are preceded by digital and printed newspapers, blogs, television and online news websites. Organizations are not immune to these type of developments; they need to be alert and ready to tackle untrue information that is being disseminated of them on social media.

The current scenario is made of a plurality of touchpoints, both online and offline, available to users to find information and content and, therefore, it is characterized by a communicative

overcrowding. This is because of many news that are born and spread quickly without being verified in advance, the risk is that these contents generate social alarm, distorted visions of reality and orientations and behaviors which can have negative consequences on individuals or the entire community. These risks are even more evident in the case of specialized news, which are difficult to interpret and have repercussions on collective behaviors. Indeed, a recent study (Jennings et al., 2021) has shown that those who get information from social media sources, such as YouTube, develop conspiratorial beliefs, and believe less in institutional sources.

In this uncertain scenario, social media play a key role and often amplify the spread of ambiguous content and fake news, of which organizations need to be aware of (Berthon et al., 2018). For example, a recent research by Media Matters (2021) has shown that the TikTok algorithm frequently amplifies false news about Coronavirus and vaccines. The algorithm of TikTok, as well as that of many other social media such as Instagram, allows you to customize your feed and, based on the preferences and likes of users, offers similar content. This research by Media Matters has shown that, after liking some fake news content, the feed will be filled almost exclusively with similar content and therefore with fake news.

2.2.2 Critical examination: The risks for organizations

The risks of the fake news' phenomenon for organizations are different. For example, as reputation is a resource on which organizations can capitalize, fake news represents a form of "pollution", a toxin that risks compromising com organizations' reputation-building strategies (Fulgoni & Lipsman, 2017). In this regard, Nyilasy (2019, p. 338) considers fake news a risk factor and an obstacle to building corporate reputation: "fake news are not just media content - their intention is to influence consumers for of a particular persuasion goal. It is undeniable that this is sponsored messaging that spreads through the media channels and with persuasive intent". As highlighted by Kwon (2019), communication flows have always had a significant impact on the identity of organizations and their reputation.

In this vein, the strength of the impact of fake news on the reputation and other intangible assets of the company is accentuated by the wide accessibility that users have to the Internet

and the role they have acquired in the management of communication flows. Indeed, due to the low barriers to entry of the web, producers of fake news are driven by economic reasons to create deceptive content: sensational headlines easily generate clicks and traffic that increase advertising volume and, by extension, revenue (Ormond et al., 2016). As a result, organizations can lose control of their communication strategies and practices (Mills & Robson, 2019). Indeed, according to a recent study by Jahng (2021), the increase in the circulation of fake news in the digital environment represents a challenge for crisis communication on social media. This challenge not only affects the reputation of organizations but also undermines the relationship with the target audience. However, according to Jahng (2021), the awareness of users about the dangers of fake news and the knowledge of the characteristics of these contents could alleviate the reputational damage for organizations. The study by Castellani and Berton (2017) reports that several companies have begun to implement strategies aimed at limiting the spread of fake news to avoid reputational damage, linked to credibility and trust or in terms of sales. According to this study, organizations affected by fake news have promoted communication campaigns with the aim of transmitting timely and transparent information through different channels, online and offline.

2.3 The narratives of Covid-19 disinformation

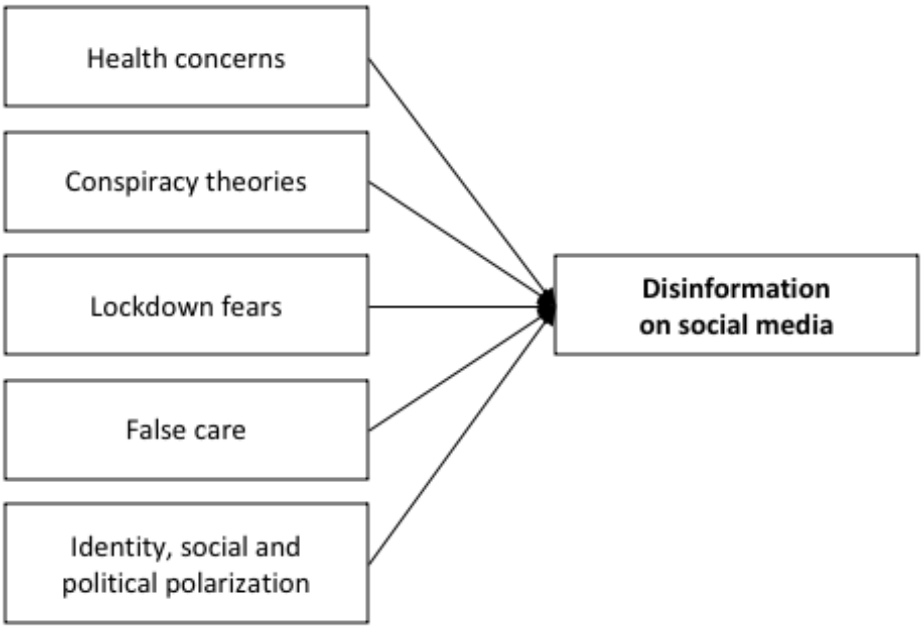
The aim of the following paragraphs is to identify the different types of the narratives of Covid-19 disinformation on social media. More specifically, I identified five different types of these narratives, i.e., the health concerns, conspiracy theories, lockdown fears, the false care and the identity, social and political polarization.

2.3.1 The different types of narratives

Since the outbreak of the Covid-19 pandemic, disinformation has taken on a strong emotional connotation capable of capturing the users attention, soliciting their interest and encouraging them to share content. The narratives on the topic of Covid-19 reflected debates concerning health, the economy and politics of those days. In particular, according to the Covid-19

Research Hub of the European Union (2020), during the pandemic, five types of narratives mainly spread on social media (Fig. 2.1): health concerns; conspiracy theories; fears related to the lockdown; false care; identity, social and political polarization.

Fig. 2.1. Narrative typologies of Covid-19 disinformation on social media platforms



Source: Author's elaboration based on Research Hub EU (2020)

Health concerns narrative

False or distorted content belonging to the narrative of health concerns was intended to spread fear and panic over the diffusion of Covid-19. The media would have given credibility to these elements of disinformation through images, decontextualized videos, memes. The strategy used for this type of narrative was based on the personification of media and authorities through false communications and documents and distorted ads. For example, a fake screenshot from the French agency BFM TV announcing new fake Covid-19 cases was released online; in Italy, ANSA (National Associated Press Agency) would have sent a WhatsApp communication to inform users of the first case of Covid-19 and in Spain a false WHO infographic would have advised not to have unprotected sex with animals to avoid the spread of the Coronavirus.

Conspiracy theories narrative

The second type of disinformation narrative that spread online during the Covid-19 pandemic is that relating to conspiracy theories. This phenomenon linked to conspiracy theories, according to Allcott and Gentzkow (2017), is closely connected to the concepts of trust in the mass media. Consequently, the decline in trust in the mainstream media could be both a cause and a consequence of fake news gaining more ground. Conspiracy theorists are able to publish their thoughts on the Net and publicly justify the theories they believe in without there being filters or barriers to entry (Sunstein & Vermeule, 2009). Some theories, such as the one of anti-Semitism, have ideological roots; or they can arise from feelings such as distrust and lack of credibility towards authorities such as politicians or the media; still other theories focus on specific events such as the 9 September attack. According to most of these theories, there are unknown and hidden power groups that manipulate the political, social and economic aspects of all individuals. Even if they have ancient origins, conspiracy theories spread much more easily and quickly on the Net and contribute to the proliferation of fake contents that pollute the Net.

Recently, the Covid-19 Research Hub of the European Union (2020) notes that, in some cases, conspiracy theories have undergone a real localization process to adapt to different territorial and cultural contexts and landscapes. For example, from some fake content disseminated in Britain, it emerged that Bill Gates would have invented the virus in collaboration with the Pirbright Institute of the United Kingdom. In France, however, there was talk of the Institut Pasteur in Paris which would have created the virus to sell vaccines on the recommendation of Bill Gates.

Among the most widespread conspiracy theories on social media, there are also contents linked to the origin of Covid-19. The epidemic would be the result of a plot implemented by the main pharmaceutical companies on the planet or as a biological weapon to exterminate the population.

Lockdown fears' narrative

The third type of narrative of disinformation on Covid-19 identified concerns the topic of the lockdown fear. Several distorted content and completely false and misleading news have been

released to announce government measures to deal with the rapid spread of the Coronavirus. The rush to Italian supermarkets, for example, is the result of a disinformation campaign based on the spread of false news according to which supermarkets would have been closed for days and there would have been difficulties in finding raw materials. Similarly, in France a letter from the Ministry of Education falsely announced the postponement of the summer school holidays. In other countries, some governments would have foreseen military interventions and, also in Italy, an image of some soldiers on a freight train in Campania has been exploited to spread the theory according to which citizens would be hiding something.

False care narrative

The fourth type of narrative analyzed by Covid-19 disinformation focuses on the topic of false cures. The impersonation of health professionals is the cornerstone of this narrative: messages and contents of various kinds have spread on social media platforms and especially on messaging spaces. For example, suspected cases of Covid-19 should not take anti-inflammatory drugs, according to a fake message signed by an IRCCS Galeazzi doctor. As the Covid-19 Research Hub points out, the doctor had never sent such a message and the evidence supporting this thesis is currently unreliable. At the same time, on social media such as Facebook some pages have been dedicated to denying the validity of the false treatments that were proposed on the same platforms.

Identity, social and political polarization

The topic of identity, social, economic and political divisions emerged strongly in the disinformation narratives during the spread of the Covid-19 epidemic. Several false contents that spread on social media in those days, in fact, clearly set themselves the goal of generating hatred towards a certain group of people for the purposes of political, social and economic polarization. For example, the European Union's Covid-19 Research Hub reveals that in the weeks France kicked off its first lockdown period, a decontextualized video spread across the Internet showing ethnic minority boys arguing in a supermarket. While in Italy the discussion on the issue of migration was intertwined with that of the pandemic. According to some false reports, Italian health personnel were prevented from carrying out anti-Covid-19 tests on migrants in reception centers.

2.3.2 Covid-19 narratives on social media

From the examination of the various disinformation narratives conducted in the previous paragraph, it clearly emerges that the fake news circulating on social media negatively impact organizations on several fronts.

First, fake news attempts to change users' minds, for example about a certain product (Berthon and Pitt, 2018); secondly, fake news assumes greater legitimacy when combined with well-known brands (Di Domenico et al., 2021), thus exposing organizations to serious reputational damage (Berduygina et al., 2019). As a result of this process, organizations will have to adopt specific response strategies to combat the phenomenon of fake news, rethinking their corporate communication activities and implementing social media listening processes and fake content mitigation approaches (Risi and Di Fraia, 2020). Indeed, according to Ferrario et al. (2019), the sedimentation of the credibility over time is the best antidote to the attack of fake news, together with the constant activity of listening and interacting on the Web. The crisis committees, in which managers of the various company departments must be present – who can be supported in their activities also by external teams of consultants –, are essential for crisis management.

The International Corporate Communication Hub (2022) shares the same opinion, according to which companies threatened by fake news, once identified thanks to Web monitoring activities, cannot afford not to respond to these attacks and will have to be available to provide information in order to contain any reputational damage. Organizations will therefore have to demonstrate an attitude of openness and respond to false and misleading content with arguments and transparency (Borges-Tiago et al., 2020). In conclusion, as a strategy to combat fake news, it becomes essential, on the one hand, to identify the false content circulating on social media regarding companies, and, on the other hand, to create credible content to respond to this threat. Indeed, in these cases, organizations which activate crisis response strategies too late can suffer significant damage to brand equity (Johar et al., 2010).
For example, in the case of the Covid-19 pandemic, which has reaffirmed the fragility of social media platforms in terms of fake news spreading (e.g., Di Domenico et al., 2021), the top-down communication approach has proved to be ineffective in limiting the spread of fake news

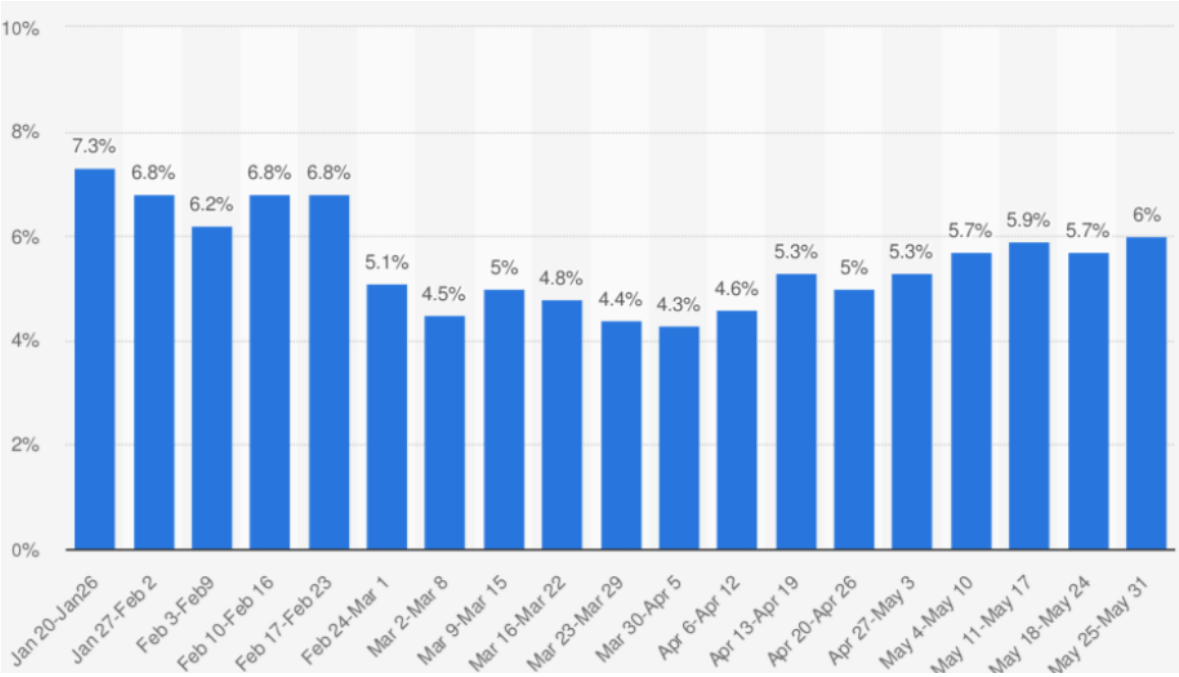
(Moscadelli et al., 2020). In such a delicate and chaotic historical moment, especially in the initial phase of the pandemic when companies and institutions lacked the knowledge and tools for clear and effective communication on the effects and consequences of Covid-19, fake news has caused social unrest such as assaults on supermarkets and exodus from the cities most affected by the virus. False information, distorted content and conspiracy theories have begun to spread on social media by leveraging feelings such as anger and impotence of users. As demonstrated by Paschen (2019), indeed, it is precisely when false contents arouse anger in the reader or spread in contexts of crisis that they manage to become viral with ease.

In other words, the infodemic has represented one of the greatest threats for organizations (World Health Organization, 2020), so much so that the latter have had to rethink their relationships with stakeholders and favor new communication methods and forms of collaboration (Crick & Crick, 2020).

2.4 The Covid-19 "infodemic"

A Censis research reveals that the web remains the privileged environment in which disinformation and fake news are produced and developed. For example, 29 million Italians declare that during the health emergency situation related to the Covid-19, they came across on the web in news then turned out to be false or wrong. Indeed, the circulation of fake news tends to intensify in periods dominated by great uncertainty. In the face of the health emergency caused by Covid-19, for example, the spread of disinformation has increased exponentially so much so that the World Health Organization has coined the term "infodemic". As a result, health organizations and authorities around the world have become increasingly aware of the damage disinformation can cause to people. At the base of this phenomenon there is the expectation of reassuring news that increases the number of people willing to believe truthful news that apparently reassure and that appear plausible also for the wide propagation and the channels of diffusion. This is confirmed by data from Statista (2021), according to which in May 2020, up to 6% of all news and online posts related to Covid-19 were false or inaccurate. As can be seen in Fig. 2.2, the peak in the release of fake news was recorded in the initial phase of the pandemic at the end of January 2020, with 7,3% of the information related to the Coronavirus.

Fig. 2.2. Share of online fake news related to Covid-19 in the period January-May 2020



Source: Statista, 2021

2.4.1 The European Union's response to the fake news phenomenon

"*The Coronavirus pandemic is also an infodemic. It is accompanied by a huge wave of disinformation and consumer hoaxes. It really showed that disinformation does not only harm the health of our democracies, it also harms the health of our citizens. It can negatively impact the economy and undermine the response of the public authorities and therefore weaken the health measures." – The European Commission Vice President Jourová, 10 June 2020*

In the past years, communicators in the European Union are becoming increasingly aware of the different disinformation tactics and processes (see e.g., EUvsdisinfo.eu). Disinformation is seen to fuel general anxiety, contribute to polarization, and to question science and experts. Furthermore, dis- and misinformation have for example been perceived to feed into vaccine hesitancy (Eurofound, 2021). The EU has several means in place to tackle disinformation, and these actions and tools have been increasingly developed and strengthened during the past couple of years. As outlined in the table below (Tab. 3), there are several institutions, organizations, and stakeholders tackling disinformation in the European Union which poses

both challenges and opportunities to the EU. On the one hand, the more there are players on the ground spotting and reviewing disinformation, the less disinformation goes unnoticed. On the other hand, due to the number of organizations and their communication professionals dealing with disinformation in the EU, creating effective and coordinated solutions to disinformation can be demanding.

Tab. 2.2 The EU's policy framework and instruments on tackling disinformation

Tool	**Overseen by**	**Implications**
EUvsDisinfo site Weekly disinformation reviews	- The EEAS (European External Action Service) Strategic Communication Division the East StratCom Task Forces Unit (ESCTF) - Holds a coordinating position within the EU when it comes to tackling disinformation by foreign actors, involves 140 EU delegations around the world	- Combines monitoring, analysis, public diplomacy, and strategic communications - Implements the Action Plan Against Disinformation and the Rapid Alert System - ESCTF monitors, identifies, and debunks pro-Kremlin disinformation e.g., on EUvsDisinfo site and - ESCTF also aims to build resilience against disinformation in the Western Balkans and the Southern neighborhood
The Rapid Alert System	- The EEAS coordinates the system in collaboration with the EU Member States - Coordinates with the G-7 Rapid Response Mechanism and NATO	- Facilitates information sharing - Exposes disinformation in real-time
The Code of Practice on Disinformation (CoPD)	- Coordinated by the European Commission	- An experiment for the technology industry to voluntary self-regulate - CoPD agreement made with major social media companies
The European Digital Media Observatory (EDMO)	- EDMO	- Coordinates the network of fact-checking organizations, researchers and media practitioners, teachers with technological platforms and public authorities

		- Aimed to strengthen the media - Offers funding for research tackling disinformation
The European Democracy Action Plan (EDAP) and the Digital Services Act (DSA)	- European Council, European Commission, European Parliament	- Propose legally binding tools especially regarding the accountability and transparency of digital platforms, and enhance the EU's democratic resilience - EDAP offers an opportunity to strengthen the Code of Practice - The DSA aims to develop rules for the online environment

Source: Author's elaboration based on Colomina, Sanchez Margalef & Youngs (2021)

2.4.2 The EU's response to a Covid-19 vaccine disinformation campaign

Both the European Medicine Agency (EMA) and the World Health Organization (WHO) became targets of Kremlin disinformation in March 2021. The disinformation story claimed that the EMA and WHO did not approve the Sputnik Covid-19 vaccine by deliberately ignoring its success. Sputnik V demanded a public apology from the chair of the EMA management board on Twitter after the EMA had discouraged the EU Member States to not to approve for the vaccine (EUvsDisinfo, 2021a).

In reality, the health regulators had not received enough information to review and prove the Sputnik V vaccine was safe for people to use. Neither EMA nor WHO had received the requested data from Russia, and some legal procedures to Russia were also still pending. EMA had earlier, in February 2021, announced that they would approve the vaccine if it met the applied standards. (EMA, 2021) In October 2021, WHO did inform that it was still pending data from Russian authorities. The vaccine disinformation campaign was proved to be disinformation by the European External Action Service (EEAS) Strategic Communication Division, and announced on the EUvsDisinfo website (EUvsDisinfo, 2021b). According to the EEAS Strategic Communication Division, the disinformation campaign was connected to a pro-Kremlin narrative that had been circulating since the launch of Sputnik V. It included a claim that the EU was not accepting Russia's primacy, and the EU did not approve of the Sputnik vaccine due to political reasons. (EUvsDisinfo, 2021b)

It seems that only the EEAS, the EU Strat Com task forces, reacted to the disinformation publicly. The EUvsDinsfo published an article and a tweet on their website and Twitter account stating that "Pro-Kremlin disinformation seeks to portray Sputnik V and Russia as unfairly treated by the West and the EU" (EUvsDisinfo, 2021c). Interestingly, it appears that the EMA did not respond to the specific disinformation on their social media channels, though they had earlier published a press release clarifying their vaccine approval process earlier in February 2022. They stated that EMA discusses the next steps with the Sputnik V producing company as well as confirmed that they apply the same approach to every vaccine application (EMA, 2021).

In this case, the response to disinformation appears to be institutionally coordinated: the EEAS East Strategic Communication task forces called out the false claims against the EMA's vaccine approval process. The benefit of this approach ensures that disinformation related to the Covid-19 vaccines stays aligned and accurate within the EU. A decentralised approach, however, would give more responsibility to the EU institution or organization to tackle disinformation based on the case at hand (Pamment, 2020). On the other hand, a faster response could potentially prevent false information from disseminating to larger audiences.

The challenge for the EU is that the producers of disinformation are not often bind by legal restrictions or the burden of bureaucracy the same way as the EU is, and their aim is to harass the climate of debate and undermine trust in institutions and organizations. Moreover, they touch upon local concerns that can be used to strengthen support for the harmful goals, and with the use of advanced technologies and means to raise attention. The adversaries may use sophisticated techniques, established networks, and narratives to reach their objectives. (Pamment, 2020) It requires a special attention for the EU to not to compromise its fundamental values when finding solutions in addressing disinformation - intertwining public diplomacy and disinformation is not an option for the EU (Vériter et al., 2020). Hence, defining disinformation in the European Union law is a tricky task which has become evident in the recent discussions on the content of the Digital Services Act. There are doubts whether the regulation will address the definition of disinformation - in other words, content that can be harmful but not *per se* illegal (Shattock, 2021). This is because it could allegedly

undermine freedom of expression (Shattock, 2021). Therefore, the discussion on expression of fundamental freedoms and legislating disinformation is likely to continue (Helm & Nasu, 2021; Osetti & Bontcheva, 2020), and creating an ethical response to disinformation will continue to lie in the heart of the matter.

2.5 Highlights and remarks

In recent years, the phenomenon of disinformation, and in particular the propagation of fake news in the digital environment and on social media platforms, has taken a key role in the academic debate of corporate communication (Lazer et al., 2018; Di Domenico et al., 2021). In addition, tackling it is likely to remain a priority of policy makers, organizations, and institutions. Indeed, although fake news is not a new phenomenon, social media platforms have facilitated their spread. On the one hand, this has become evident in compromising the right of users to be correctly informed, and on the other hand, by threatening and attacking the organizations based on fake content that undermine both their credibility and reputation.

In fact, it is not always easy to distinguish the true from the false on these digital platforms. In the era of the Covid-19 pandemic, during which the use of digital channels has exploded around the world, fake content spreads rapidly, decisively influencing behavior and the choices of individuals. Many news items are inaccurate, deliberately distorted or completely unfounded. Oftentimes untrue information heavily affects users' perception of reality, alternating the tendency to underestimate the problem with feelings of panic.

For organizations, combating the spread of fake news represents one of the arduous challenges to be faced in this complex scenario. In that, the number of channels and spaces in which to interact with stakeholders has multiplied. Digital communication, therefore, plays a central role in combating disinformation in the online environment. Many institutions and organizations, including the European Union Institutions which we analyzed in this chapter, have understood the importance of digital communication to tackle this phenomenon. Through communications on social media and on dedicated websites, organizations daily try to face this challenge that concerns them closely. According to the literature (e.g., Allcott & Gentzkow, 2017), among the intentions of the sources that disseminate fake news on social

media there is not only the economic aspect, but also social and political issues that push fake news disseminators to carry out these polluting actions for the web.

Therefore, although social media are digital spaces in which fake news thrives, these channels represent a means for organizations to address the concerns of users and create and strengthen relationships of trust with stakeholders with effective digital communication. For example, this is evident in the EU: the European institutions have created policies, tools, and communication practices to tackle disinformation.

Hence, organizations nowadays seem to have gained the awareness of the phenomenon of disinformation and that anyone can become a target of disinformation. This is demonstrated both by the communication studies that have been developing around the topic of fake news in recent years (e.g., Bethon et al., 2018; Di Domenico et al., 2021; Obada, 2019).

Future reflections on this issue could concern the means by which organizations can effectively address both disinformation targeted at them. In addition, discussion on the ethical approach to prevent the spread of disinformation from becoming uncontrolled by polluting the web would be of importance. In particular, the perception of users regarding the reliability of the source could be worthy of further analysis by scholars and professionals.

Chapter 3.
Research Aims and Methodology

3.1 Introduction

The first two chapters of this PhD thesis represent an introduction of the fake news phenomenon and, specifically, an examination of the academic literature on fake news topic, i.e. the theoretical underpinning (Chapter 1), and a scenario analysis regarding the evolution of the phenomenon of disinformation in Europe during the pandemic of Covid-19 (Chapter 2).

Starting from these theoretical premises, the aim of this thesis is to investigate how fake news attacks organizations and compromise their corporate reputation. In this chapter the specific objectives of the research and the methodology adopted to conduct the investigation are illustrated.

The chapter is structured as follows. In the following paragraphs, the research questions and the research design are presented. Afterwards, the adopted methods to achieve the research aims are presented, i.e., the qualitative content analysis, the longitudinal case studies and the survey.

3.2 Research questions and design

As emerged from the theoretical part of the thesis, fake news represents a threat to organizations (Berthon et al., 2018), which can lose the control over their social evaluations and public perceptions as a result of direct or indirect interactions with fake news (Fulgoni & Lipsman, 2017). Therefore, it is crucial for companies to successfully identify the fake news circulating around them and identify how fake news attacks organizations. Hence, the aim of this study is to answer the following research questions:

RQ1. How does fake news, during its life cycle, attack the corporate reputation?

RQ2. Which is the role of the key actors involved in the stemming process of fake news?
RQ3. What are the more effective response strategies of organizations threatened by fake news?

To seek to answer these research questions, the study, conducted following the systematic review from which emerged three macro-dimensions of fake news, i.e. content, form and language (see Chapter 1), was set up in the phases explained below.

3.2.1 Data collection

To achieve the research aim, the Pennycook et al. (2021)' work on fake news research was followed. According to these authors, fake news studies may focus on news headlines rather than full articles. In experiments, for example, this happens to avoid methodological difficulties, such as allowing people to decide which part of an article to read or require full attention. Furthermore, as revealed by Gabielkov et al. (2016), most web and social media users don't read past the full headlines. This is the reason why I focused on the fake news headlines which appeared on the Internet during the Covid-19 pandemic. Specifically, among the fact-checking organizations that collect false or misleading content, Poynter International Fact-Checking Network represents the most prominent network of debunking websites (Pennycook et al., 2021). This database unites fact-checkers in more than 70 countries and includes articles published in at least 40 languages.

On the Poynter.org database, I selected 454 fake news headlines about Covid-19 vaccines. The collected fake news headlines contain the keywords "Astrazeneca", "Pfitzer", "Moderna" and have been published in the time frame from 2020, when vaccine trials began, until January 2022. First, I created a work sheet in which we imported the 454 fake news headlines with their URLs. Second, I eliminated the fake news headlines that repeated two or more times.

3.2.2 Data analysis

Specifically, the data was analyzed according to the following three steps:

1. a *qualitative content analysis* (QCA) was conducted on a database of 454 fake news headlines concerning the organizations that have produced vaccines to combat the pandemic;

2. *longitudinal case studies* are conducted on four different ideal types of fake news emerged from the QCA;

3. a *survey* on 500 Italian adults was conducted with the aim to investigate both the perception of Italian about the fake news phenomenon and to identify the corporate and institutional communication strategies of response deemed most appropriate to stem fake news. Responses were collected between January and February 2022. This survey is part of the project "Fake news: perceptions, actors and strategies" (2022) promoted by the International Corporate Communication Hub and the IULM University, coordinated by Stefania Romenti and formed by Elanor Colleoni, Mirko Olivieri and Denis Simunovic.

In the following paragraphs, the research methods are detailed.

3.3 The Qualitative Content Analysis (QCA)

To achieve the research aim of this PhD thesis, I opted for a qualitative content analysis. Generally, the qualitative content analysis enables researchers to interpret textual data, classify them systematically and identify themes and patterns (Hsieh & Shannon, 2005). Indeed, in the data analysis phase, I identified and interpreted the themes related to the research object by highlighting and labeling key points as codes and, then, I compared the codes with a thematic similarity. As a result, relationships and sub-categories have been identified. This process allowed to analyze qualitative textual data and re-propose them in a meaningful way (Creswell & Poth, 2016).

"Content analysis is a method for analyzing the content of a variety of data, such as visual and verbal data. It enables the reduction of phenomena or events into defined categories so as to better analyse and interpret them" (Harwood & Garry, 2003, p. 479). More specifically, the

term “content analysis” designates a large and heterogeneous set of methods oriented to the control of certain hypotheses on communication facts and that, for this purpose, use analytical decomposition and classification procedures, normally a statistical destination of texts and other symbolic ensembles (Rositi, 1982). According to Tipaldo (2007), the multiplicity and high internal differentiation of the different research objects place the current content analysis in a highly multidisciplinary dimension, which is constantly enriched by contributions from disciplines such as social research, history, linguistics, semiotics, social psychology, statistics, applied computer science, to the point that the denomination of “content analysis” may no longer be adequate because of the reference to the American mass communication research of the 1950s (Losito, 2004). However, the spread with which this term has now taken root in academic literature has led the scientific community to keep its use. Despite the heterogeneity of the objects under investigation and the multiplicity of disciplinary areas in which they were placed to point, almost all content analysis techniques reveal the same operating procedure: all methods of content analysis essentially consist of a breakdown of the communication unit into simpler elements (classification units) and the classification of the latter into categorical variables, having predefined the context unit to which reference must be made in the act of classifying (Rositi, 1988; Tipaldo, 2007).

The origin of this method of investigation dates back to the twentieth century, and in particular to the Second World War, when scholars of the allied forces analyzed the songs broadcast by European radio stations (Wimmer-Dominick, 1997). By comparing the music transmitted by German radios with that of the countries of occupied Europe, the scholars were able to identify the movements of German troops in Europe. Even after the end of World War II, researchers continued to use this technique to analyze propaganda spread through traditional media. In 1952, with the publication of Bernard Berelson’s (1952) volume Content Analysis in Communication Research, qualitative content analysis is fully accepted as a research tool in media studies. In particular, this methodology allows to catalog the characteristics of certain contents in one or more time periods, for descriptive purposes. Furthermore, it can be used to test certain hypotheses about the characteristics of a given message: for example, to ascertain whether certain sources produce content with certain characteristics. This method is also used for “reality checks”, i.e. to compare the media content with the real world, such as the

correspondence between the representation of violence in the media and the violence actually existing in the real world.

In the academic literature, the history of qualitative content analysis is a succession of different phases (Mayring, 2000):

1. *precursors*: in this phase the approaches to content analysis all consist in the comparison of the texts in hermeneutic contexts (e.g., biblical interpretations) or in the analysis of the contents published in the first newspapers;

2. *theoretical foundations of communication*: this phase is marked by the presence of scholars such as Lazarsfeld and Lasswell and corresponds to the 1920s and 1930s. At this stage, the content analysis is mostly quantitative;

3. *interdisciplinary broadening and differentiation*: in this third phase, which developed in the 1960s, this methodology also reached disciplines such as linguistics and psychology, in the arts (Rust, 1983). The protocols of the investigations are more precise than in the past and reference is made to theoretical models to analyze the contents (e.g. Gerbner et al., 1969);

4. *qualitative critique phase*: this is the phase in which the objections to simplifying and distorting quantifications are raised by scholars (Kracauer, 1952). Qualitative approaches to content analysis then begin to spread (e.g., Altheide, 1996; Mostyn 1985).

Recently, Krippendorff (2018) defined qualitative content analysis as a research technique for developing replicable and valid inferences from texts, or other significant matter, to the contexts of their use, with the aim of providing knowledge, new insights, a representation of facts and guidance. In other words, it is an analytical approach based on identifying and quantifying significant categories of content within a text, whether it is verbal or visual, but also examining the relationship between these categories. First of all, the content analysis must be systematic, both in selecting the sample and in conducting the actual analysis. To ensure that the evaluation is also conducted with the same approach, it is therefore necessary to use only a single set of directives for the entire study. Secondly, the analysis of the content must

be objective, that is to have operational definitions and classification rules of the variables as explicit and exhaustive as possible, so as to allow another researcher, who finds himself repeating the same process, to reach the same conclusions. It is therefore necessary to establish a set of criteria and procedures that clearly explain the sampling and categorization methods used.

3.3.1 The QCA framework

Krippendorff (2018) identified three different types of methodological approaches about content analysis: inductive, deductive and abductive.

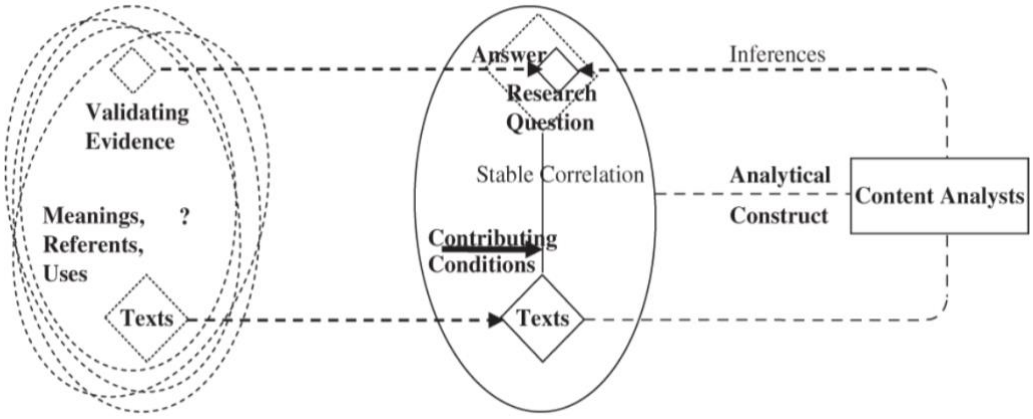
An *inductive approach*, also called data-driven or text-driven, is characterized by the search for patterns. During the analysis the researcher looks for similarities and differences in the data, described in categories and/or themes at various levels of abstraction and interpretation. The challenge in conducting inductive analysis is to avoid superficial descriptions and general summaries. This is an approach that is particularly useful when there is not enough previous knowledge of the phenomenon or if this knowledge is fragmented.

Using a *deductive approach*, also called concept-driven, researchers test the implications of existing theories or explanatory models on the phenomenon under study using the collected data. Deductive content analysis is used when the research structure is operationalized on the basis of prior knowledge and the purpose of the study is the verification of the theory. Thus, an inductive data-based approach moves from specific to general, so that particular instances are observed and then combined into a larger whole or general statement. A deductive approach is based on a previous theory or model and therefore moves from the general to the specific.

An *abductive approach*, also called complementary, combined, retroductive or fuzzy logic implies a continuous alternation between inductive and deductive approaches. Krippendorff (2018) defines abduction as a way to discover meaningful underlying patterns that make it possible to integrate superficial and deep structures.

The scholar developed a framework (Fig. 3.1) with three main purposes: to guide conceptualization e the practical design of content analysis research, facilitate the examination critique and comparison of published content analyzes, establish criteria and standards that researchers can use to evaluate ongoing content analysis (Krippendorff, 2004).

Fig. 3.1. Content analysis framework



Source: Krippendorff, 2004

The framework consists of six key elements: (1) the starting data, (2) the research question, (3) a context, (4) an analytic construct, (5) the inferences to answer research questions, (6) validation of evidence.

Among the *data* used in a content analysis, textual data are certainly the most important and frequent ones. The appropriate text for content analysis must have seven fundamental characteristics: cohesion, coherence, intentionality, acceptability, informativeness, situationality and intertextuality (White & Marsh, 2006). In other words, the text should consist of linguistic elements arranged in one linear sequence in such a way as to create a message (cohesion). The text must have a meaning, often established through relationships or implications and must be understandable to the recipient (consistency). The purpose of the writer must be to convey meaning (intentionality). Conversely, the recipients of the message understand the message and expect it to be useful and relevant (acceptability). The text may contain new or expected information (informativeness). The context in which the text is inserted affects its production and its production determines the contents (situationality). The text is often related to what precedes and follows, as in a conversation (intertextuality).

Research questions are the target of the researchers' inferences. A question research is analogous to a series of hypotheses, which are resolved through data inference. There are two main reasons why content analysis it must start with research questions before making any inquiries: efficiency and empirical basis (Krippendorff, 2004). When a researcher is motivated by a specific research question, the analysis can proceed faster from sampling of relevant data to answer specific questions. Furthermore, data are analyzed with a specific purpose and not for what they could lead to think about the author or what they say in the abstract.

The *context* is the conceptual environment of the data, the situation in which they are inserted. In content analysis the context expresses what the researcher does with the data, it can be considered the researcher's best guess as to where the text (and the data in general) comes from, what is its meaning, what it can say or do. The context specifies the world within which the data can be related to the questions of research. This world is usually just one of many that could be considered and depends on the perspectives with which the researcher faces the research topic.

The *analytic construct* makes operational what content analysis knows about context. Specifically, it is the set of correlations that are assumed for explain how the available data relate to the possible answers to the questions of research and the conditions under which these correlations can change. The analytic construct is extracted from the known context and inserted in the search process. It guarantees that an analysis on the data does not modify the context of data use. This means that the analysis does not proceed in violation of what is known about the conditions surrounding the data.

The *inferential nature* of content analysis makes the step to build inferences key. Often this step occurs during encoding data manual. Three types of inferences can be distinguished: deductive, inductive, abductive. The one relevant for content analysis is only the abductive one. Abductive inference proceeds through logically distinct domains, from particular ones of one type to details of another type, taking into account the characteristics some data.

Finally, according to Krippendorff (2004), content analysis must be *validable*. A feature of the content analysis and which often studies phenomena in which there are no direct

observations and evidence that can confirm the research evidence. Thus, validation can be difficult or impossible in practice, consequently in content analysis validity is achieved through replicability or by rendering the process repeatable by anyone who wants to check it.

In any case, with respect to the quantitative content analysis, which is a method that allows for an objective, systematic and quantitative description of the content (Berelson, 1952), qualitative content analysis has been defined as a context-specific methodology (Schreier, 2012). In this technique, context represents a key element for data interpretation (Kohlbacher, 2006) and, unlike quantitative content analysis, the focus is on the subjective interpretation of the content of textual data while maintaining "the systematic classification process of coding and identification of themes or models" (Hsien & Shannon, 2005, p. 1278).

According to Wimmer and Dominick (1997), this process is the result of a sequence of steps:
1. *Formulate the hypothesis or research question*. As with any other research methodology, the researcher must have a clear idea of a research hypothesis or question, normally matured after a careful examination of the academic literature. A well-formulated research hypothesis facilitates the development of accurate and meaningful content categories which in turn help produce valuable data;

2. *Define the population considered*. In this second phase, the researcher will have to define the boundaries of the content under consideration and then define the portion of the population concerned. Before deciding on this population, the context must be determined by considering two dimensions: the topical area that will be studied and the time period of the study;

3. *Select a sample*. The sampling technique most commonly used in content analysis is the multi-level one. First, we will have to select a series of sources (databases, websites, newspapers, etc.) and then select certain data (for example, some issues of a newspaper or magazine). With this two-level selection, the researcher can get to have a more manageable amount of data to analyze;

4. *Select the unit of analysis*. That is to define the minimum element of a content analysis, what is actually measured. In the case of written content, this unit can be a single word or

symbol, action or scene. In some cases this selection is simpler: for example, it is quite easy to identify the events reported by the international news, while counting certain types of actions in the media can become very complicated. It is therefore necessary to formulate the operational definitions of the unit of analysis in a precise manner and, in addition, to make the inclusion criteria evident and easily observable. The researcher does not reach these goals immediately, but only after a gradual process of 'trial and error' and improvement;

5. *Build the categories of analysis content*. This phase is essential to make the analysis profitable. It is therefore necessary to classify the data according to certain categories of content developed by the researcher himself. These categories must be mutually exclusive, comprehensive and reliable. That is, a unit of analysis can only be included in a content category. In the event that a unit can be included in two different categories, then the researcher will have to modify his categorization system in order to make the categories mutually exclusive. Furthermore, these categories must be exhaustive - each unit of analysis must be included in a category; in many content analyzes, researchers often solve the problem of exhaustiveness by creating a category called 'other'. Finally, the categories must be reliable. The various coders must broadly agree on the most appropriate content category for each unit of analysis. This agreement between the different encoders is quantified and called inter-encoder reliability;

6. *Establish a quantitative system*. Typically three levels of measurement are used for this step: nominal, interval and proportional data. The first measurements, namely the nominal ones, allow us to simply quantify the frequency of the units in each content category. This is a very superficial measure, which must therefore be integrated with the interval measure to make the analysis more in-depth. Furthermore, at this stage, scales can be developed that coders use to classify certain attributes to units of analysis. The last level of measurement is the proportional one, which usually refers to the context, that is, to space and time. For example, when analyzing the facts reported by a media, one can measure the length of the text. In the case of radio and television broadcasts, the length of the program can be measured in minutes;

7. *Code the content*. The coding process consists in the classification of a unit of analysis within a certain category of content by the coders, who are the people involved in this activity.

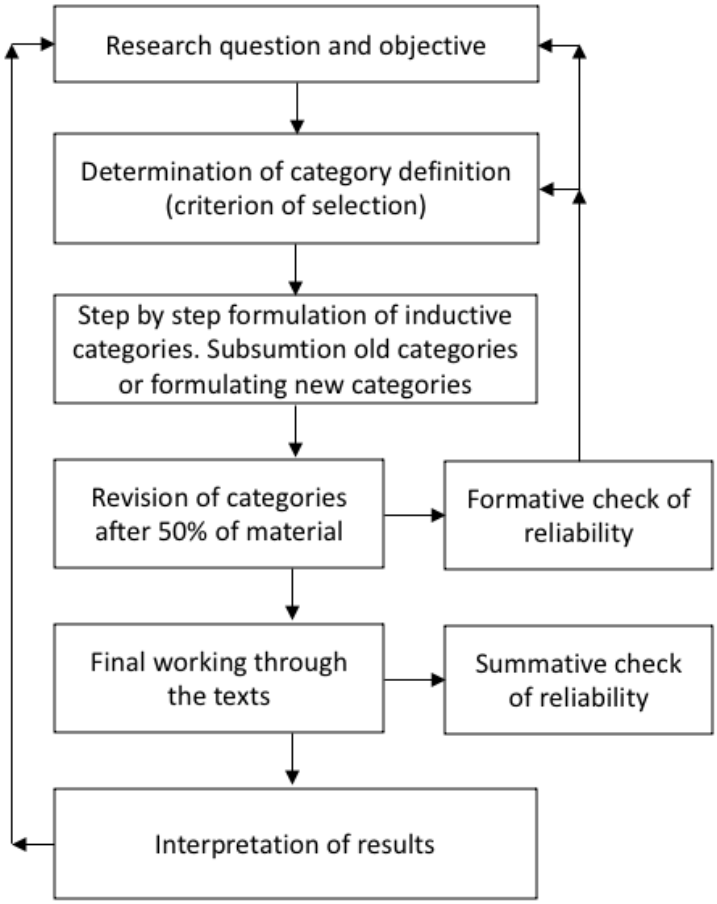
To increase research reliability, all coders need to share moments of preparation to familiarize themselves with definitions and units of analysis, and to practice coding operations. To make coding easier and more reliable, content analyzes usually employ standardized forms, which researchers can use to classify data by ticking the items in the form;

8. *Interpret the results*. This is the most original and creative phase of the study. At this stage, the researcher will have to demonstrate that the results add something new to what is already known and make a significant contribution to the academic literature. It is the time to return to the literature to demonstrate how the research results prove or disprove existing knowledge.

3.3.2 The QCA process

By following the step model of inductive category development (Fig. 3.2) by Mayring (2000), I analysed the material and the provisional categories which were deduced step by step.

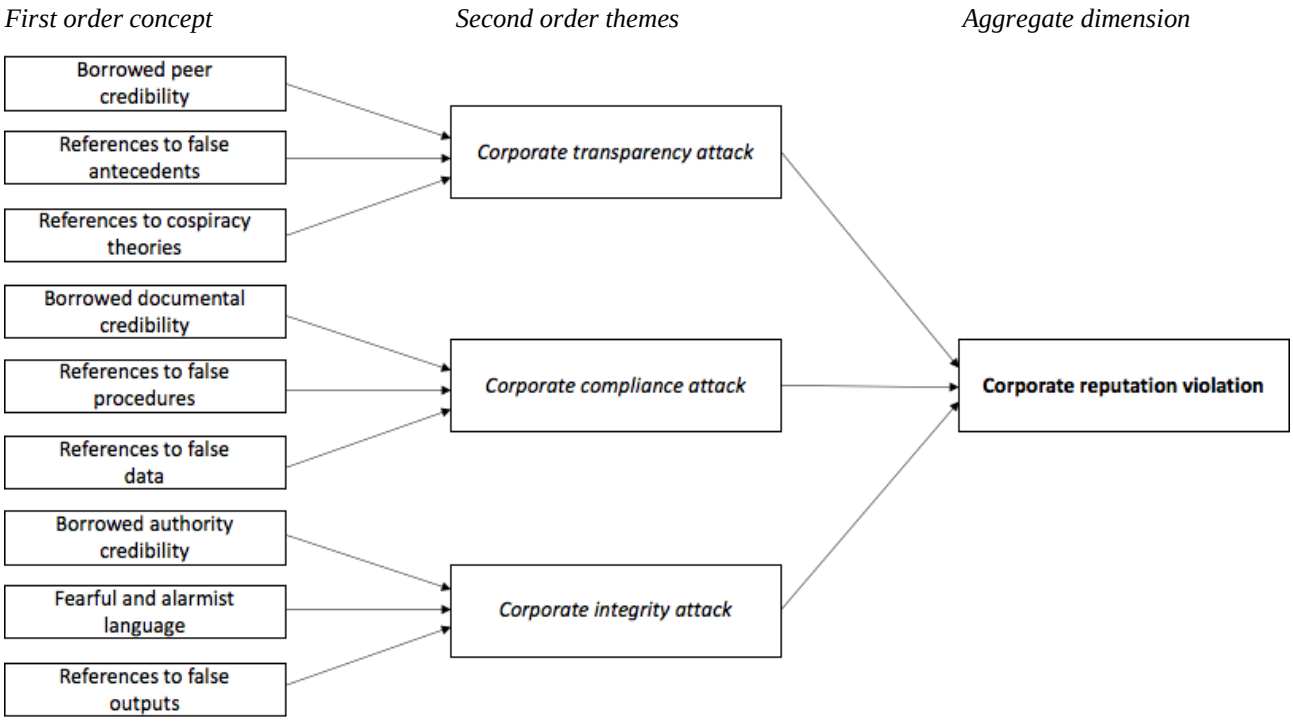
Fig. 3.2 The step model of inductive category development



Source: Adapted from Mayring (2000)

The categories emerged from this analysis (Fig. 3.3) were reviewed in a feedback loop, traced back to main categories and checked for their reliability.

Fig. 3.3 Data structure



Source: Author's elaboration

3.4 Longitudinal case study analysis

Considering the first results emerged from the QCA described above, namely the fake news strategies of attacking, it has been decided to deepen the phenomenon with the longitudinal case study method. This research method made it possible to investigate in depth the different attack strategies of fake news emerged from the QCA, i.e. (1) *bottom-up attack on what company is*; (2) *certified attack on what company is*; (3) *bottom up attack on company behavior*; (4) *certified attack on company behavior*.

The aim of this paragraph is to present the longitudinal case study method and its application in this study.

3.4.1 The case study method

The term "case study" represents a concept with one of the most ambiguous and controversial uses and meanings in the social sciences. This term is referred to many disciplinary fields and in various types of research in which, however, it is referred to in a confused and controversial way. According to Sena (2016), at the definitional level, the term case study can refer both to the research process and to the final product of this process as well as to precise techniques and to comprehensive approaches. Furthermore, Gomm et al. (2000) note that the meaning of case study has often overlapped with that of other terms, such as those of ethnography, participant observation, field work, qualitative research more generally. Furthermore, due to the transversality of this concept in a plethora of disciplinary fields, the meanings that are attributed to this concept are often very different from each other.

Despite this confusion on the concept of case study, from the 1980s onwards a substantial methodological literature on case study research has developed, coming from researchers from different disciplines. In the Italian context, the case study was generally considered as a term, generally taken for granted, used in research that uses this expression to indicate subjects or phenomena or events considered as "cases" or specific objects of investigation (Sena, 2016).

Traditionally, the term case study as a research approach was first introduced in the historical disciplines and later in the other social sciences (Jocher, 1928). In fact, according to Platt (1988), the origin of the case study in American sociology seems to have occurred in relation to other similar concepts, such as case history or case work of social workers. Studies from that period, indeed, take it for granted that the data is accessible for the case studies, they came mainly from the reports and archives of American welfare services (the so-called "social work"). For these reasons, it was used in the early sociological studies of the Chicago School, later becoming one of the reference points of these investigations. Until the sociologists of Harvard University questioned the methodological validity of the research produced by the Chigaco School, in fact, sociology was the discipline most clearly associated with the case study method.

Generally, according to the Sena historical reconstruction (2016), the case study was used in the past to indicate a qualitative approach which, in the interwar years, was used to refer to a number of other ways of doing research, such as stories of life collected in any way, personal documents, individual interviews of all kinds, close studies of one or a few cases, with or without attempts at generalization, holistic studies of a phenomenon. In general terms, it can be said that the case study as a method of investigation has not been associated with a well-defined research method or approach during that period.

In the 1960s, in the methodological literature, there are several attempts to resurrect the case study, although this has remained a minority trend. Finally, from the 1980s onwards, scholars began to seriously discuss the case study as a specific research method in the social sciences (e.g., Rosenblatt, 1981; Yin, 1984). With these studies we begin to distinguish the case study from participant observation or other field analysis.

Consequently, the defining question of the term case study, which scholars have considered thorny, also arrives at the center of the academic debate. The term "case" can be a limited object or process, theoretical or empirical (Ragin & Becker, 1992). Gerring (2007) argues that "case" connotes a spatially delimited phenomenon, which is analyzed at a precise moment or over a period of time, and for which we want to try to provide an explanation. Specifically in the socio-economic field, Sena (2016) has collected a series of contrasting points of view. One of the most cited definitions in the literature is that provided by Yin (1984), which consists of two parts: the first part emphasizes the purpose that this method should have, while the second part of the definition concerns the more technical aspects. Specifically, according to the author, a case study is an empirical investigation that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the links between phenomenon and context are not clearly evident. The case study investigation addresses the technically distinct situation in which there will be many variables of interest; it is based on multiple sources of evidence, with data needing to converge in the mode of triangulation, and as another result; benefits from the previous development of theoretical propositions to guide data collection and analysis.

3.4.2 The longitudinal case study in academic literature

According to Street and Ward (2012, p. 160), "the longitudinal case study examines chronological timelines of events or changes in real-world organizational characteristics over time, and is therefore a valuable methodology".

The two authorsinterpret the "case study" consistently with the definitions of Yin (1994) and Eisenhardt (1989), that is, as the study of a phenomenon in a real-life context or setting, argue the longitudinal case study falls under this general definition, with an additional element, namely the consideration of chronological periods or sequences of events which are explicitly or implicitly included as an independent variable. More specifically, in longitudinal case studies, changes in variables are examined in relation to the passage of time, so time becomes an additional variable which must be accounted for in the research. Particularly, when a study reports how an individual, group or organization has changed between two points in time, the time variable takes on different values. Time should, therefore, be understood as a variable that has a theoretical value, not yet proven, on something of interest for research.

Street and Ward (2012) argue that the time variable has been considered in the academic literature as a key element - Sabherwal et al. (2001), for example, argue that time affects the extent to which organizations are able to resume normal operations after a major organizational change. Furthermore, according to Sarkar and Lee (2003), time affects strong and committed leadership. These researches considered time as an independent variable by acting on several dependent variables. However, according to other studies time may not be a traditional research variable: for example, Schonfeld and Rindskopf (2007) show that some longitudinal case studies do not explicitly recognize time as a variable within the research design. Other scholars, such as Nandhakumar (2002), argue that time is a social mental construct. Saunders and Kim (2007), moreover, find that time only implicitly reflects on a study and they understand it as a "silent visitor". Therefore, authors consider time as an independent variable in longitudinal case studies and, according to Street and Ward (2012, p. 162), "to the extent that researchers are concerned with validity and reliability, time should be accounted for in a way that is consistent with other variables in the research design".

Indeed, according to McLeod et al. (2011), in a longitudinal case study data are collected over a prolonged period in order to investigate how certain conditions change over time (Yin, 2003). Generally, holistic case studies are conducted longitudinally (Walsham 1993) to facilitate a "multifaceted treatment of change" (Pettigrew, 1990, p. 270). Longitudinal case studies are, therefore, adopted in scientific research as they allow the researcher to observe the development of a certain phenomenon and to describe the events and interpretations of the subjects involved as they occur. In this way, the evolution dynamics of a given phenomenon are highlighted by the researcher; interactions with the phenomenon are tracked; and phenomena in constantly changing contexts, which are difficult to capture using cross-cutting methods, are analyzed more easily.

For these reasons, I conducted four longitudinal case studies with the aim to investigate the evolution of fake news corresponding to the four attack strategies emerged from the QCA. Specifically, the longitudinal case studies allowed me to track the spread of fake news and explore the evolution over the time of these fake news.

Finally, the findings of this study were triangulated with data found on fact checking websites, that dealt with the analyzed fake news.

Chapter 4.
The Fake News Attack Strategies: A Qualitative Analysis[3]

4.1 Introduction

Corporate reputation has gained increased attention in the last decades as a critical intangible asset that allows companies to build a competitive advantage (Barnett et al., 2006). Prominent scholars have shown how corporate reputation is a trait that signals a company's likely behaviour, a signal about future actions and behaviour, a commitment which justifies and promotes expectations of consumers (Fombrun & Shanley, 1990; Rindova et al., 2005). Extant research has shown how the social evaluations of the individuals of a company are influenced by these signals (George et al., 2016; Rindova et al., 2005).

According to the signaling theory (Spence, 1974), signals are not only sent out by the company, but also by accredited signalers which have access to privileged information which is not observable to outsiders. Indeed, scholars such as Carter (2006) have shown how reputation is signaled not only through market actions, but also by communication such as press releases or advertising. Deephouse (2002) coined the term "media reputation" to account for the effect that media outlets have on the formation of corporate reputation, thanks to their recognized expertise and superior access to information (Rao, 1998; Rindova et al., 2005). One common assumption about reputation as a signal is that the information signaled by these signalers (e.g. organization or intermediary) is assumed to accurately report the qualities of the organization (Gardberg et al., 2021). This happens because the signaler is considered to be credible as individuals are assumed to efficiently select credible sources, disregarding low credible ones (Gomulya & Mishina, 2017).

[3] The results of this systematic literature review have been presented during the 2022 Convegno Sinergie-SIMA: **Olivieri, M.**, Colleoni, E., Romenti, S., & Murtarelli, G. (2022). *Fake news as violation of corporate reputation: The attack strategies in time of Covid-19*. In Convegno Sinergie SIMA 2022, June 30- July 1, Università Bocconi, Milan, Italy.

However, in this fake news' era, individuals are increasingly exposed to fake signals that in the digital environment, and on social media in particular, are teeming (Visentin et al., 2019). Fake news, which is intentionally and verifiably false content that could mislead readers (Allcott & Gentzkow, 2017), represents a threat to organizations (Berthon et al., 2018), as they could lose the control of their communication strategies following direct or indirect interactions with fake news (Fulgoni & Lipsman, 2017).

Although the formation of corporate reputation has been analyzed as the result of the signal and the signaler (Gomulya and Mishina, 2017), so far no study investigated how some types of violations, such as fake news, represent an attack to corporate reputation. In particular, with this research, we aim at understanding how fake news attacks organizations in a digital environment and threaten the corporate reputation formation.

This chapter is organized as follows. The main corporate reputation studies and the main theories on its formation are reviewed in paragraph 4.2, whit a focus on crisis communication theories. Subsequently, in paragraph 4.3 the findings of this research are explained, i.e. four attack strategies of fake news to organizations are identified and for each strategy a case study was examined. Finally, highlights and remarks conclude the chapter.

4.2 Fake news and crisis communication theories

Fake news, defined as distorted information, misleading content or rumors (Lazer et al., 2018) about an issue or a company, is not something new, but their scope and sophistication are evolved in the digital environment. The speed of spreading of this content and its ability to penetrate the media landscape by generating uncontrolled disinformation have made fake news a powerful tool able to shape public perceptions about social, economic, and political issues (Lewandowsky & van der Linden, 2021). This is because new technologies, and especially social media platforms, on the one hand, facilitate the dissemination of communications, and on the other hand, they allow unverified news, such as fake news, to be shared with no control (Bovet & Makse, 2019; Mills et al., 2019) because of their structure that permits to publish content without editorial filters (Allcott & Gentzkow, 2017). For this reason, scholars have paid more attention to the topic of fake news in recent years, adopting,

among others, perspectives of Political Communication, Sociology, Corporate Communication and Marketing Management.

As explained in the Chapter 1, Lazer et al. (2018, p. 1094) defined fake news as "fabricated information that mimics news media content in form but not in organizational process or intent". Fake news is intentionally false but realistic information, fabricated with the intent to deceive and be taken for truth. To do so, fake news imitates the look and feel of real news, journalist style (Lazer et al., 2018), images and visual content (Pashen, 2019). Hiding under a veneer of legitimacy, it takes on some forms of credibility by trying to appear like real news.

This phenomenon has become even more central since the outbreak of the Covid-19 pandemic – the use of digital channels, in fact, has increased exponentially worldwide and users have encountered fake news more frequently than in the past. For example, a survey by Statista (2021) revealed that 60% of users between the ages of 16 and 24 used digital channels during the pandemic for information on Covid-19, and 59% of these found fake news on this topic. Among the targets of the fake news that circulated online in the months of the health emergency were not only the institutions that were accused by conspiracy theorists of the genesis of Covid-19, but also the companies that produced vaccines to stop the pandemic. In fact, the issue of fake news worries not only institutions, but also companies that see their corporate reputation increasingly threatened by false and misleading content about their actions.

Specifically, in recent years, there has been a greater emphasis on corporate reputation value by scholars and practitioners and, with the significant increase of the number of corporate reputation research articles (e.g., Fombrun et al., 2004; Bromley, 2002; Chun, 2005; Hillenbrand & Money, 2007; Helm, 2011; Romenti, 2010), there has been a clear fragmentation and diversion in the meaning of corporate reputation, the essence of the concept, its measurement and its management implications (Barnett et al., 2006).

In general terms, as Romenti (2008) points out, reputation plays a key role in corporate governance since it acts as a reinforcement of the propensity of economic actors to offer or refuse their support to the company. A good reputation acts as an information signal for

potential stakeholders (Fombrun & Shanley, 1990) and, therefore, is able to attract new critical resources and supports the process of generating sustainable value by companies. In this regard, the microeconomic theories of the agency, of information reporting (Spence, 1974) and of games (Milgrom & Roberts, 1981) are the first to address the issue of the importance of reputation for the success of organizations. However, these studies failed to demonstrate the direct link between reputation and the generation of economic value (Romenti, 2008). Only later does the resource based theory make an important contribution in explaining the role played by reputation in the production of value. Indeed, according to the resource based theory, reputation is an intangible and strategic asset that allows companies to generate more lasting competitive advantages than those created through traditional positioning strategies (Amit & Schoemaker, 1993; Hall, 1993; Weigelt & Camerer, 1988).

Generally, corporate reputation is an important means by which companies can maintain a sustainable competitive advantage and withstand long-term relationships with multiple stakeholder groups (Boyd et al., 2010). Also, researchers agreed that a favorable corporate reputation is one of the most important intangible assets driving the company's performance (Fisher-Buttingere Vallaster, 2011; Gibson et al., 2006). Not to be confused with organizational identity and image, corporate reputation is often defined as consumer opinions, perceptions, and attitudes towards the company (see Tab. 4.1).

Tab. 4.1 Definitions of organizational identity, organizational image and corporate reputation

Source	*Organizational identity*		*Organizational image*		*Corporate reputation*	
	Definition	*Stakeholders: actual or desired*	*Definition*	*Stakeholders: actual or desired*	*Definition*	*Stakeholders: actual or desired*
Gray and Balmer, 1998: 695–697	'… the distinct characteristics of the organization or, stated very simply, "what the organization is"'.	Not specified; actual	'… the mental picture of the company held by its audience – what comes to mind when one sees or hears the corporate name or sees its logo'.	External; actual	'… connotes the estimation of the company by its constituents. Is it held in high or low repute or somewhere in between?'	Internal and external; actual
Bromley, 2000: 241	'… the way key members conceptualize their organization'.	Internal; actual	'… the way an organization presents itself to its publics, especially visually'.	External; desired	'… the way key external stakeholders groups or other interested parties actually conceptualize that organization'.	External; actual
Scott and Lane, 2000: 43–44	'… the set of beliefs shared between top managers and stakeholders about the central, enduring, and distinctive characteristics of an organization'.	Internal and external; actual	'… the way organizational members believe others see their organization (ie, construed external image; Dutton *et al*., 1994), as the way that top management would like outsiders to see the organization (ie, desired image; Whetten, Lewis, & Mischel, 1992), and as the overall impression that companies make on external constituents (ie, reputation; Bromley, 1993)'.	Internal and external; not clear	None given	Not applicable
Davies *et al*., 2001: 113–114	'… the internal, that is employees' view of the company'.	Internal; actual	'… the view of the company held by external stakeholders, especially that held by customers'.	External; actual	'… a collective term referring to all stakeholders' view of corporate reputation, including identity and image'.	Internal and external; actual
Whetten and Mackey, 2002: 394 and 401	'… that which is most central, enduring, and distinctive about an organization'.	Not specified; actual	'… what organizational agents want their external stakeholders to understand is most central, enduring, and distinctive about their organization'.	External; desired	'… a particular type of feedback, received by an organization from its stakeholders, concerning the credibility of the organization's identity claims'.	Internal and external; actual
Lewellyn, 2002: 448	'… a message communicated within a firm'.	Internal; desired	'… a message sent from an organization to its external stakeholders'.	External; desired	'… a message available to an organization from its stakeholders'.	Internal and external; actual
Barnett *et al*., 2006: 33–34	'… the underlying "core" or basic character of the firm … what the firm actually is'.	Not specified; actual	'… observer's general impressions of a corporation's distinct collection of symbols, whether that observer is internal or external to the firm. Image is "what comes to mind when one hears the name or sees the logo"'.	Internal and external; actual	'… the judgments made by observers about a firm'.	External; actual
Brown *et al*., 2006: 104	None given	Not applicable	'… what an organizational member wants others to know (or believes others know) about the organization'.	External; desired	'… a perception of the organization actually held by external stakeholders'.	External; actual
Cornelissen *et al*., 2007: S3	'The shared meaning that an organizational entity is understood to have that arises from its members' (and others') awareness that they belong to it'.	Internal; actual	They use the term 'Corporate Identity': 'The distinctive public image that a corporate entity communicates that structures people's engagement with it'.	External; desired	None given	Not applicable

Source: Walker, 2010

Therefore, corporate reputation is linked to consumers' subjective assessment of the company (Weigelt & Camerer, 1988). More specifically, previous studies have reported that a positive reputation has a significant effect on a company's ability to reduce costs, set higher prices and increase profits (Rindova et al., 2005; Roberts & Dowling, 2002). Researchers, in fact, noted that a positive reputation improves consumers' purchasing intent, attitude towards the company and its products, and brand loyalty (Brown, 1997; Saxton, 1998). Many corporate communications' studies have focused on the issue of crisis management and the problems associated with a negative corporate reputation, which can significantly aggravate the consumer's attitude and intent to buy. Some researchers have noted that negative information affects consumers' overall assessment of a product or company more strongly than positive information does. Since consumers tend to depend on company and product information in order to reduce perceived risks when making purchasing decisions, a negative corporate reputation may be a more important feature than a positive reputation in the current digital environment.

Indeed, the growing globalization of the markets and the instantaneous exchange of information are the reasons for the growing importance of a company's reputation management. Businesses are realizing that they can no longer wait to react when faced with a reputation crisis and they should proactively seek to improve corporate reputation. A positive corporate reputation should not only be seen as a safeguard for companies during turbulent times, but as a strategic approach to supporting a company throughout its life. This would help companies to achieve a strategic competitive advantage that would sustain a business over the long term.

Specifically in the academic debate, scholars have divided the literature on corporate reputation into three periods, to explain in a simple and practical way the development of this concept over time. In the initial phase from 1940 to 1990, corporate reputation is first described as an infallible strategic asset that can contribute to the company's profit and competitive advantage (Shrume, 1988; Weigelt & Camerer, 1988; Cloninger, 1995). Shortly after it was revised with reference to signal theory, Riahi-Belkaoui and Pavlik (1991) support the idea that corporate reputation is largely driven by wealth management, market reporting, and accounting information. Finally, the reputation and the related constructs have been

studied with the company at the center, in fact, Bolger (1959) measures the reputation through the "corporate image profile", which helps to systematically evaluate one's own corporate reputation, the reputation of competitors and stakeholder expectations. In this period, there are clearly two distinct research streams: reputation as an intangible asset, with research often conducted at an organizational level, and reputation as a stakeholder perception, with research often conducted on an individual level. Indeed, defining and differentiating reputation is what many authors in the 1990-2006 period aim to achieve.

Corporate reputation concerns the assessments of stakeholders regarding the organization's ability to meet their wide-ranging expectations. A contribution to define corporate reputation from a perceptive perspective is provided by Wartick (2002), arguing that corporate reputation is the aggregation of every single perception of stakeholders, of how the company responds to the questions and expectations of corporate stakeholders. While early scholars hardly distinguish between the concepts of image, identity, and reputation, and often use these terms interchangeably (MacLeod, 2007), scholars in the 1990s and early 2000s try to be more explicit. Authors refer to identity as internal associations on a company, held by its members; to the organizational image as internally held associations, which reflect the way others see a company; and to the reputation as an individual and external vision of a company's stakeholders. Furthermore, measuring reputation emerges as a key ambition of scholars of this period, measurement tools and frameworks are published, for example, by scholars such as Fombrun et al. (2000), Davies et al. (2001), Berens and Van Riel (2004).

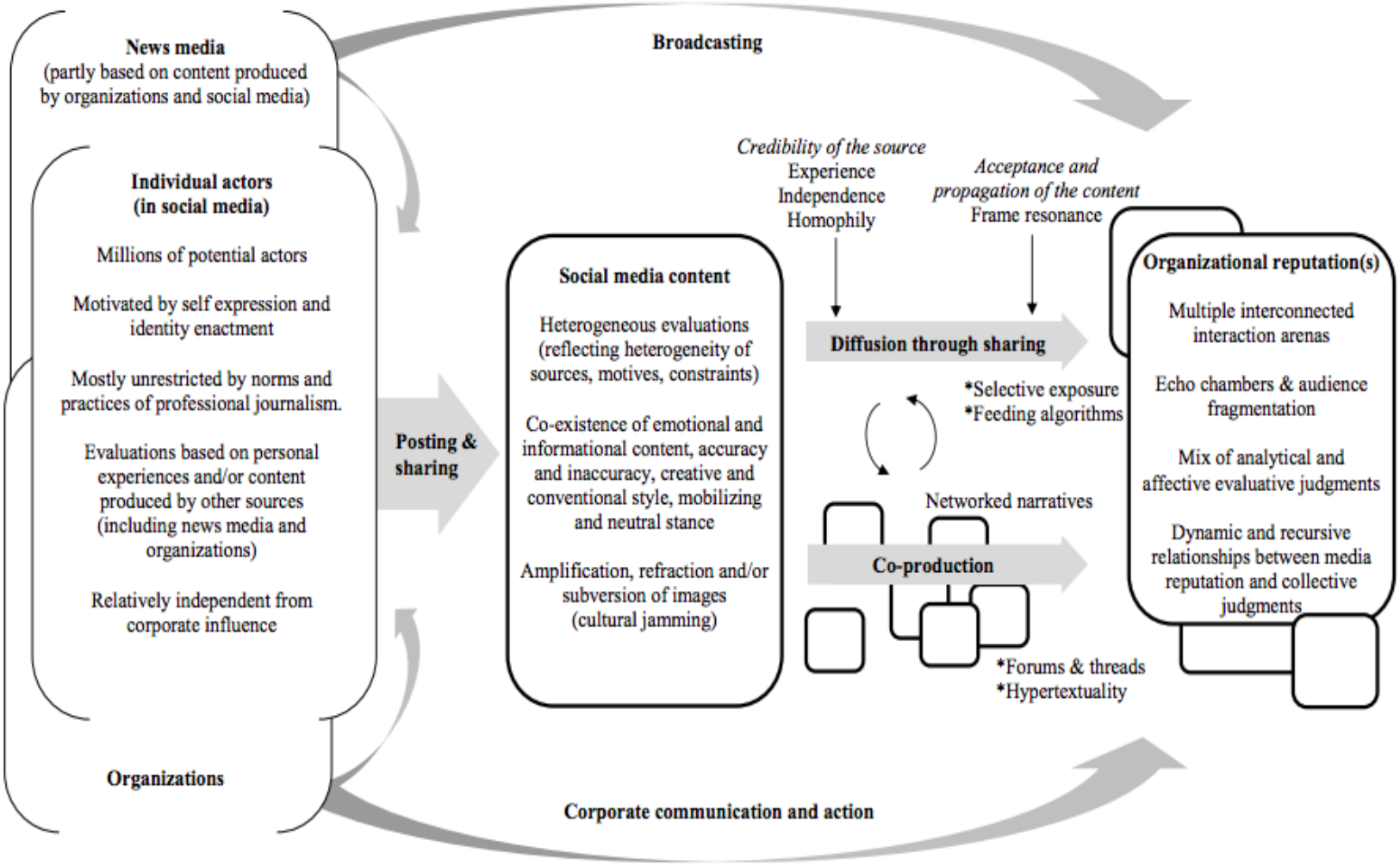
As part of the relational approach, research from 2006 onwards focuses on a profound exploration of stakeholders' perceptions, emotions, beliefs and thoughts, as stakeholders often react unpredictably and differently to the same organizational stimuli (West et al., 2010). The benefits related to corporate reputation include, for example, the loyalty and commitment of stakeholders, positive purchasing intentions among customers, intentions to invest or look for work, sponsorship or word of mouth.

With the advent of digital platform, also the concept of corporate reputation evolved. Specifically, with "digital corporate reputation" we mean the overall reputation that a company enjoys at a given moment in time in a specific online community for a category of

stakeholders, deriving both from information disseminated on the network by the company through communication activities and from information disseminated by stakeholders (Dossena, 2012). One of the main differences from traditional media is the bi-directional nature of the web (Dellarocas, 2005): the web is not just a communication channel that companies can activate to send their messages to a wide audience, but it allows stakeholders to make their opinions accessible not only to the company but also to the internet community. From a basically business-centric communication, destined to persuade the public through advertising campaigns on the mass media, we have moved on to a polycentric communication, for which, thanks to the digital network and technology, the contents of the communication are generated more and more by conversations online carried out by individuals (Siano et al., 2015). In the digital environment, we can emphasize the importance of two of the main innovations for businesses: improving customer confidence, reputation and company image through the appropriate use of social networks; improve the participation of people in business through the personalization of digital platforms.

It is commonly recognized the importance that web and social media take in determining the reputation of companies (Carroll & McCombs, 2003; Etter et al., 2019). Social media support the creation of informal networks of users, facilitating the flow of ideas and knowledge and allow for the effective generation, dissemination, sharing, modification and refinement of information content (Constantinides & Fountain, 2008). Indeed, recent studies have shown that the strongest influence on individual decisions is, by far, the recommendation of colleagues as well as friends and family. When social media are used by friends, the impact of the recommendation is much more efficient. This phenomenon has previously been studied and coined as "electronic word of mouth" (e-WOM) which influences the corporate reputation asset (Chu & Kim, 2011). In particular, according to Etter et al. (2019), the formation process of the corporate reputation, because of the advent of the Internet and social media, has changed profoundly, as emerges from the framework proposed by scholars (Fig. 4.1).

Fig. 4.1 Framework of the formation of reputation in new media landscape



Source: Etter et al. (2019)

According to the aforementioned framework, the corporate reputation formation process in the digital environment starts from the consideration that users play a more active and interactive role in these new digital spaces. Furthermore, the corporate reputation goes considered as a single entity that is made up of homogeneous assessments, rather than as a plurality of different and potentially coexisting judgments at any given time.

Finally, according to Etter et al. (2019), organizations should rethink the role of the emotional component of reputational judgments, both in terms of their creation both as regards their diffusion on the Net. Emotions like joy, anger, frustration, surprise or shock would motivate users a publicly share their shopping experiences. On the Net, in fact, contents with an emotional component form are more considered than informative contents - according to Berger and Milkman (2012), the probability that emotional contents will become viral and be further disseminated on the social network increases.

The last aspect that characterizes the dynamics of the formation of corporate reputation on social media compared to traditional media is the permanence on social media platforms of the contents, which are stored over time and can be traced by anyone.

Precisely with reference to these new dynamics of training and management of corporate reputation in an online environment, Lampignano (2016) has identified five different progressive levels in the design of reputation.

1. The *conceived reputation*: consists of a general idea initial which, although still a hypothesis, must still have concrete foundations. The strategic orientation of the company, understood as the set of ideas, values and beliefs that are rooted in the organization and that yes reflect in its way of operating, they will have to guide the processes of formation of reputation. Furthermore, it must be based on the past and on the present of the company: it must consider what the company is able to do, its products or services, its brand, its processes, technologies and everything that distinguishes it as an economic entity.

2. The *programmed reputation*, which represents a first description of the reputation in its core guidelines. It must indicate the modalities with which it will be implemented, the reference

media, timing, programs and resources. In this phase, all possible limits and costs to be incurred for reputation creation and management are considered. Furthermore, this phase also identifies the first methodologies for evaluating the results of each stage.

3. The *projected reputation*: concretely, the reputation is endowed with times and methods, closing the phase of hypotheses. Resources are considered at this stage, both financial and human, necessary for the implementation of reputation management processes on the various channels and the costs for the organization are accurately formalize. Finally, in this phase the rules for monitoring corporate reputation are shared;

4. The *achieved reputation*: actions, behaviors and narratives on the various channels concretize the corporate reputation. Each channel does characterizes for a specific project and for a specific work plan. At this stage, it is necessary to harmonize all projects and work plans.

5. The *perceived reputation*, which consists of the corporate reputation that stakeholders have perceived and must be monitored through precise and continuous processes. All information collected must be kept in archives that allow reputation management team to evaluate the progress of the reputation during the time, and which will be useful for the organization to update the corporate reputation management processes.

In this new digital landscape, measuring corporate reputation is a main goal for many professionals and academics. Historically, professionals were the first to propose ways to measure corporate reputation, for example Fortune magazine developed a survey tool in which financial analysts and executives are asked to rate companies based on the following eight characteristics: (1) financial strength, (2) long-term investment value, (3) wise use of company assets, (4) innovation, (5) ability to attract, develop and retain people's talent, (6) quality of products and services, (7) management quality, and (8) community and environmental responsibility (Sobol et al., 1988). This survey format is still used to determine Fortune's ranking of America's Most Admired Companies. Measures developed by professionals are useful for assessing corporate reputation, but they have a variety of drawbacks: First, these measures assess corporate perceptions based on a group of stakeholders, primarily, financial analysts and investors. Therefore, the results could be skewed due to the perspectives of other

stakeholders not adequately considered. Second, the measures have not been tested for validity and reliability.

From an academic point of view, a series of measures for corporate reputation from a multifaceted perspective have been proposed. The most popular measure, still used today, was the one developed by Fombrun et al. (2000). They developed the reputation quotient (RQ), a multidimensional construct made up of six dimensions that identifies stakeholder perceptions of a company's reputation. These dimensions include: (1) emotional appeal, (2) products and services, (3) vision and leadership, (4) social responsibility, (5) work environment, and (6) financial performance.

Generally, both academic and professional measures are the drivers of reputation assessment for stakeholders if they are confident in a company's capabilities and reliability and see it as a major competitor in the market.

In conclusion, as emerged from the corporate reputation literature, companies do not have full control of the signals that circulate about them as many other accredited signalers, such as media and financial analysts (Deephouse, 2002), that intervene in the process of corporate reputation formation thanks to their recognized competence and superior access to information (Rindova et al., 2005; Spence, 1974). In this way, the corporate reputation, which according to Mishina et al. (2012) is formed on the basis of character reputation and capability reputation, can be threatened by violations such as fake news that spread in the digital space. In particular, in the academic literature (e.g., Roberts & Dowling, 2002; Spence, 1974), capability reputation is associated to collective assessments of the quality and performance characteristics of a company; while, with character reputation we identify the collective judgments regarding the incentive structures, the behavioral tendencies of a company based on the observations of its previous actions, the imputation that stakeholders make on the objectives, preferences and values of the organization (Rosenthal, 1981).

A common assumption about reputation as a signal is that information reported by these signalers, such as organizations or intermediaries, is assumed to accurately report the organization's qualities (Gardberg et al., 2021). This happens because the signaler is

considered to be credible, as low quality signalers will prove not trustworthy in the long term and therefore ignored by individuals who are presumed to efficiently select among sources (Gomulya & Mishina, 2017). On the contrary, users are unfortunately strongly exposed to fake signals in the digital environment and often trust and share fake content (Gardberg et al., 2021). For instance, Visentin et al. (2019) empirically demonstrated the consequences of fake news on brands advertised on websites along with fake content. According to this study, consumer purchase intentions and word of mouth (WOM) are also affected by the impact of fake news circulating on the web.

4.2.1 The Image Repair Theory (IRT)

Among the socio-economic theories which try to explain the behavior of organizations in the event of a crisis, such as the reputational crises resulting from the phenomenon of fake news, we find the Image Repair Theory by Benoit (1995). The starting point of the IRT is a reputational threat to the organization (Gistri, 2018), i.e. an attack that consists of an offensive act and an accusation of responsibility. The objective of the IRT is to understand the possible communication options for organizations facing a reputational threat – communication is, therefore, intended as a means of defending corporate reputation.

Specifically, from the first formulation of Benoit's IRT (1995), most of the corrective strategies have been analyzed in the context of an organization's reaction to a crisis (Benoit & Pang, 2008). Particularly, studies in this regard show that multiple problems influence the ability of an organization to save its reputation after a crisis – Coombs (1998) determined through experimental research that the level of responsibility and the type of crisis affect the reputation of an organization. Another key role is played by the perceptions of responsibility, the previous corporate reputation (Coombs & Holladay, 2002).

In general terms, in the academic literature we find five strategies for applying the IRT (Benoit & Pang, 2008) - *denial, evasion of responsibility, reduction of offensiveness, corrective actions and mortification*:

1. in the event that the organization resorts to *denial strategy*, it can be affirmed that it has not carried out the act for which the organization is accused, or to shift the blame by identifying another responsible for the incident;
2. in the case of *evasion of responsibility*, the organization maintains that what happened is the consequence of an act caused by another entity, that the event was an accident or that it had good intentions;
3. in the event that the organization decides to *reduce the offensiveness* of an act, it will resort to the strengthening of its "good traits", to minimization – what happened is not as serious as it is presented –, to differentiation, that is to say the act is not as offensive as other similar ones, to transcendence, arguing that there are more important considerations, attacking the accuser or compensating the victim;
4. in the event that the organization opts for *corrective action* as an IRT strategy, a plan will be proposed to resolve or prevent the problem;
5. finally, when the organization decides to apologize, the communicative entity practices *mortification*.

The above strategies of the IRT are rarely used in isolation (Holtzhausen & Roberts, 2009). Indeed, when an organization opts for a combination of empowerment, blame shifting and corrective actions, uses separation as an image repair strategy. In this case, the objective becomes the isolation from the responsibility of the crisis and the blame of another entity. According to Lee (2004), however, it may not always be wise to apply defensive strategies. In fact, the scholar has shown that when an organization uses a "No Comment" strategy, rather than a minimization strategy, generates significantly more trust from target audiences and is seen as less accountable. In this regard, Lee (2004) argues there are cultural differences in the application of defensive strategies and, for example, Eastern societies, compared to Western ones, would be more tolerant of the silence of an organization hit by a reputational crisis.

4.2.2 The Situational Crisis Communication Theory (SCCT)

The response strategies of companies are also contemplated in the so-called "Situational Crisis Communication Theory" (SCCT), which is among the most frequently cited crisis communication theories in the last thirty years (Gistri, 2018). The goal of this theory is to

predict how individuals perceive crises and their reactions to organizations' responses. According to Gistri (2018), the nature of the crisis situation shapes this perception and the attribution of responsibility – the goal of the SCCT is therefore to understand how people attribute responsibility for a crisis and what are the consequences of this attribution. of responsibility for their attitudes. For example, if the organization is held responsible for a crisis, its corporate reputation will be threatened and people may decide to terminate their relationship with this organization.

For this reason, according to the SCCT, the organization, starting from an assessment of the specific crisis situation, will have to opt for the best reputation protection strategy. Specifically, the organization will have to evaluate the initial responsibility for the crisis, the history of the crisis and the previous reputation of the organization.

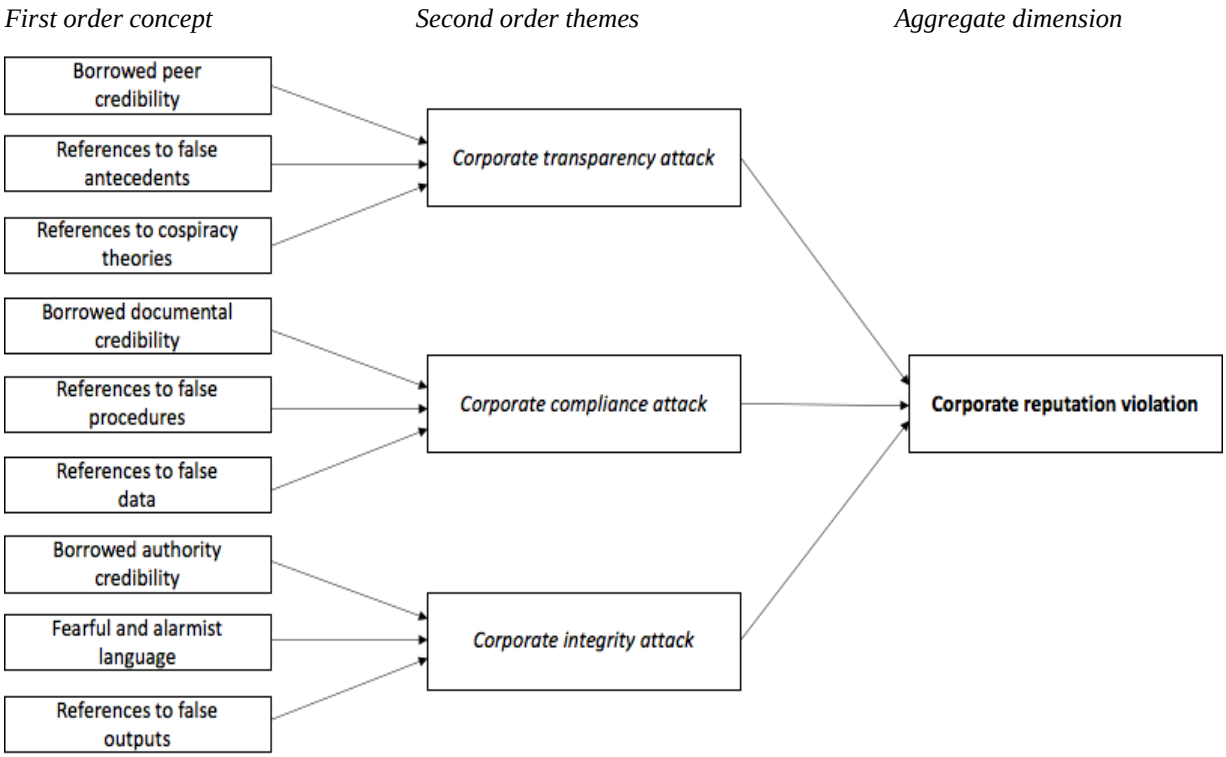
According to Coombs (1995), the initial responsibility for the crisis is the quantification of the attribution of responsibility by the stakeholders, i.e. how much the organization's actions are held responsible for the crisis. According to some scholars (Cooper, 2002; Druckman, 2001), this initial assessment is based on the framing of the crisis, for example the way in which media messages about the crisis are composed and disseminated could influence people's judgment. The organization will therefore have to define and control the perimeter of the media coverage of the crisis, emphasizing certain factors.

In this regard, the SCCT identifies three types of crisis:
1. the *cluster of victims*, which includes crises such as natural disasters or tampering which therefore make the organization considered a victim;
2. the *accidental cluster*, which includes crises due to technical errors and the crisis is not considered as intentional. In this case, the organization's attribution of responsibility is medium;
3. the *intentional cluster*, which concerns crises due to human errors or misdeeds of the organization. This type of crisis involves a strong attribution of responsibility towards the organization.

4.3 Findings

From the QCA conducted on the database of 454 fake news headlines various categories emerged, as reported in the figure 4.2.

Figure 4.2. Data structure



Source: Author's elaboration

Particularly, the results of this study highlight the different strategies of attack by fake news on the corporate reputation of the organizations that have produced vaccines against Covid-19. In particular, two types of borrowed credibility and two thematic clusters of fake news has been identified. From the intersection of these dimensions of fake news, four strategies for attacking corporate reputation have emerged, as will be illustrated in the following paragraphs.

4.3.1 The fake news' credibility and thematic clusters

From the content analysis conducted for this study, it emerged that fake news attacking the pharmaceutical companies which have produced the vaccines to counteract the Covid-19 pandemic is based on different types of borrowed credibility. Specifically, the results show that fake news develops from credibility provided by other individuals (*peers*) or organizations (*documents/authorities*), as can be seen in Tab 4.2.

We have defined the first type as "borrowed peer credibility", i.e. the credibility that refers to peers who would have seen something or lived a certain (false) experience; the second type of credibility on which fake news is based is the "documental/authority credibility". With this term we mean fake news which cite any false documentary source, such as photos, images, videos, or those fake news that, to ensure that their credibility is greater. Therefore, their content result being more realistic, mention institutions, accredited research institutes, scientists, governments and authorities in general which would have disseminated the news.

Tab. 4.2 Typologies of fake news credibility

Fake news' example	**Borrowed credibility typology**
People say that Mike Yeadon – ex-worker of Pfizer – told that vaccine against COVID-19 will kill 0,8% people after first injection and other people will died within 2 or 3 years. *A man claims that the Pfizer vaccine will cause either Guillain-Barré syndrome or cancer. It will modify your DNA and that Christians do not accept it.* *The citizens were vaccinated with AstraZeneca, Sinopharm, Sputnik V, Pfizer, and soon with Sinovac. There was a lot of speculation about the composition of the vaccines, so some vaccinated citizens decided to do an interesting experiment. A woman from Skopje who received the Sputnik V vaccine decided to try an experiment that is circulating on social networks. At first, she thought it was a joke, but when she saw it with her own eyes she was amazed. She took a teaspoon and brought it close to the place where she was vaccinated as if there was a magnet under the skin that immediately attracted the teaspoon. And after this, the question remains what is really in this Russian vaccine. – I didn't believe what I saw, the spoon was standing on my hand as if it was attached to something, as if they had put a magnet in my hand, says the woman from Skopje who was shocked after the experiment.*	Borrowed peer credibility
Researchers: Mortality Rates Shoot in Israel After Pfizer's COVID Vaccination. *Videos show two women having trouble moving or speaking due to tremor side effects of the Pfizer and Moderna vaccines.* *Nick Janakis, professor of pulmonology at the University of Crete stated that the odds of developing thrombosis from the AstraZeneca vaccine are not small.*	Borrowed documental/authority credibility

Source: Author's elaboration

In terms of content, the analyzed fake news contain references to two different thematic clusters (Tab. 4.3): (1) *fake company value/identity* and (2) *references to false procedures*.

Fake news that contains references to fake value/identity generally question the company's transparency by hiding something such as negative effects discovered through reports or other

sources. Often, they cite conspiracy theories and treat the pandemic as something premeditated by organizations.

Moreover, the second type of fake news' thematic cluster attack companies by criticizing the production chain of vaccines or the methods of managing the administration of vaccines to the population.

Tab. 4.3 Thematic clusters of fake news

Fake news' example	**Thematic clusters**
Based on evidence that was presented in a report that was submitted to the World Health Organisation, the Pfizer/BioNTech mRNA vaccine against SARS-CoV-2 can cause infertility in women. This is caused due to the fact that the virus spike protein is very similar to syncytin-1, a protein involved in the process of placental development. Also the vaccine ingredient mNeonGreen is potentially dangerous. *The Wuhan biological laboratory belongs to the pharmaceutical company Glaxo, in a chain of relationships in which Pfizer, George Soros, Bill Gates and the WHO also participate, which makes clear the origin of a pandemic that enslaves society.*	Fake company value/identity
One of the ingredients in the COVID-19 vaccine by AstraZeneca is "ChAdOx1-S"which is recombinant DNA, meaning it contains genes from two different species. This ingredient will cause DNA modifications to any person who gets vaccinated. *The AstraZeneca vaccine contains the potentially dangerous substance polysorbate 80, which, according to research in rats, has caused cancer and infertility in them. Polysorbate 80 is added to the vaccines in order to cross the blood-brain barrier and penetrate the human brain.*	Fake procedures

Source: Author's elaboration

4.4.2 Fake news' attack strategies

Crossing our results and specifically focusing on the two types of borrowed credibility and the two thematic clusters which we illustrated in the previous paragraphs, we note that the attacks of fake news on the corporate reputation of companies that produce vaccines to combat the pandemic of Covid-19 concern both character reputation and capability reputation (Mishina et al., 2012).

In Tab. 4.4, the attack strategies of fake news to corporate reputation are presented, revealing that fake news intervenes in the process of formation of reputation by attacking different company assets, and specifically both what company does and what company is.

Tab. 4.4. Fake news' attack strategies

		Thematic clusters	
		Fake company value/identity	**Fake procedures**
Borrowed credibility	**Peer credibility**	*Bottom up attack on what company is*	*Bottom up attack on company behavior*
	Documental/ Authority credibility	*Certified attack on what company is*	*Certified attack on company behavior*

Source: Author's elaboration

According to Mishina et al. (2012), the character reputation represents what the company is and what distinguishes it; while, with capability reputation the scholars mean what the company does, its behaviors, its relationships with stakeholders. More specifically, as indicated in Tab. 4.5, with this analysis we identified four ideal types of fake news attack strategies on corporate reputation:

- *bottom up attack on what company is*: fake news affecting corporate values or identity by recurring to the borrowed peer credibility. These are the fake news that attack the corporate character reputation by leveraging corporate values such as ethics, transparency or corporate social responsibility;

- *certified attack on what company is*: the second type of fake news that attacks the character corporate reputation uses the borrowed documental or authority credibility, that is, using documentary sources (e.g. photos, videos, reports) or authoritative

sources (e.g. researchers, institutions, government authorities) which affect the values of companies or their corporate identity;

- *bottom up attack on company behavior*: the fake news that attack what the company does, and therefore the capability reputation, are those that use the borrowed peer credibility to question certain company procedures and behaviors;

- *certified attack on company behavior*: finally, the latest type of fake news attack includes those news that hit the capability reputation by using the documental or authority credibility. For example, by recurring to fake sources which reveal something that the company has done and has generally kept hidden.

Tab. 4.5 Examples of fake news for each attack strategy

Attack strategy	**Fake news' example**
Bottom up attack on what company is	"According to a greek priest the Pfizer/BioNTech mRNA vaccines for SARS-CoV-2 contain cells from aborted fetuses."
Certified attack on what company is	"The scandal was revealed by the German police with a search of a glassware factory, which at the beginning of November 2019 received an order from Pfizer for 1.6 million vaccine bottles."
Bottom up attack on company behavior	"A man claims that the Pfizer vaccine will cause either Guillain-Barré syndrome or cancer. It will modify your DNA and that Christians do not accept it."
Certified attack on company behavior	"Nick Janakis, professor of pulmonology at the University of Crete stated that the odds of developing thrombosis from the AstraZeneca vaccine are not small."

Source: Author's elaboration

4.4 The case studies of attack strategies

From the QCA conducted for this study, four different strategies for attacking fake news on organizations which produce vaccines emerged. Then, as illustrated in the methodology chapter, four longitudinal case studies were conducted to investigate in-depth these strategies

and to explore the evolution over the time of these fake news. The aim of the following paragraphs is to illustrate the four case studies focusing on the life cycle of fake news.

4.4.1 Fake news' attack strategies on company values

Bottom-up attack on company values

"According to a greek priest the Pfizer/BioNTech mRNA vaccines for SARS-CoV-2 contain cells from aborted fetuses."

Among the various fake news that have circulated on the Net and that have tried to damage the pharmaceutical companies producing vaccines to fight the pandemic, there is a statement by a Greek priest, Kythera Seraphim, who claimed that the new vaccines arrived in Greece and which have begun their use for SARS-CoV-2 are prepared with "products of abortion". Specifically, according to the reconstruction of the European Times, in reference to vaccines against Covid-19, the Greek priest allegedly stated: "This product that comes from killed embryos will be injected into our bodies [...]. They want to create a metahuman, a changed man, a man who will be like a robot".

The claim that vaccines in general, not just the new SARS-CoV-2 vaccines, contain aborted embryonic cells has been around for many years. However, the truth is that there are some cell cultures that actually used embryonic cells from abortions that were done legally, but these are cultures that started at least 50 years ago. Specifically, the WI-38 cell line isolated after a 3-month fetal abortion in 1962 in the United States and the MRC-5 cell line isolated after a 14-week fetal abortion in the United Kingdom in 1966. These are the two basic embryonic cell lines used to grow viruses in the context of vaccine development as most vaccines use animal cells for this purpose. As explained by a Focus.it article to unmask this fake news, when it is necessary to use these cells, they are cultured under controlled conditions of temperature, humidity and nutrients; when they are no longer used, they are kept at an extremely low temperature, remaining vital but dormant for years. This means that every time this cell line is used, cells from isolations occurred in the past are used. For this reason it is

beyond all reasonable logic to believe that abortions are carried out, or that there is a trade in embryos, justified by experimental reasons.

Moreover, Ellinika Hoaxes notes that few of the approximately 78 vaccines developed for SARS-CoV-2 have used such cells. An example of a company that has used cells of this type, namely the HEK 293 cell line, which derives from an embryo abortion in 1973, is AstraZeneca. In any case, the Pfizer BioNTech vaccine that arrived in Greece and is currently in use is an mRNA vaccine and no human embryonic cells were used to make it.

In fact, the reconstruction of the life cycle conducted for this case study revealed that the news on the use of these cells was not disclosed for the first time by the Greek priest, but has its origins in some posts published on Facebook already some month before, as you can see in the following table.

Indeed, by spreading a video of Australia's deputy chief medical officer, Dr. Nick Coatsworth, the post (Fig. 4.3) stated in a distorted way: "aborted babies are being used to develop a Covid-19 vaccine".

Fig. 4.3. Dr. Nick Coatsworth's video on a Facebook post

Source: Facebook.com

Subsequently, in November of the same year, the Facebook page "We are vaxxed" published: aborted Male fetus in Covid-19 vaccine.

Fig. 4.4 Post by We are vaxxed Facebook

Source: Facebook.com

Only from this moment on, the media, and in particular fact checking organizations (e.g., APP), have begun to unmask this fake news by scientifically reconstructing the distortion of the news and interviewing authoritative scientists and researchers to clarify. For example, the Osservatorio Malattie Rare published in April 2021 an interview with Dr. Roberta Villa,

doctor and scientific journalist, in which she explains that there is absolutely no trade in fetuses and there is no incentive to have an abortion.

Despite fact-checking organizations and the media that have exposed this hoax, the fake news has continued to circulate in the digital environment as it evolves. In October 2021, the LifeSite web page (Fig. 4.5) publishes an interview with Melissa Strickler, presented as a former Pfizer employee, who first claims that the company's vaccine against the new Coronavirus would contain the bioluminescent enzyme luciferase, then talks about lines cell phones from aborted fetuses, used for the creation of the vaccine: "HEK-293 cells were chosen for their ability to grow and [...] according to him, they are basically 'cancerous cells' of an aborted child", according to Renovatio21 web page.

Fig. 4.5 Lifesite article

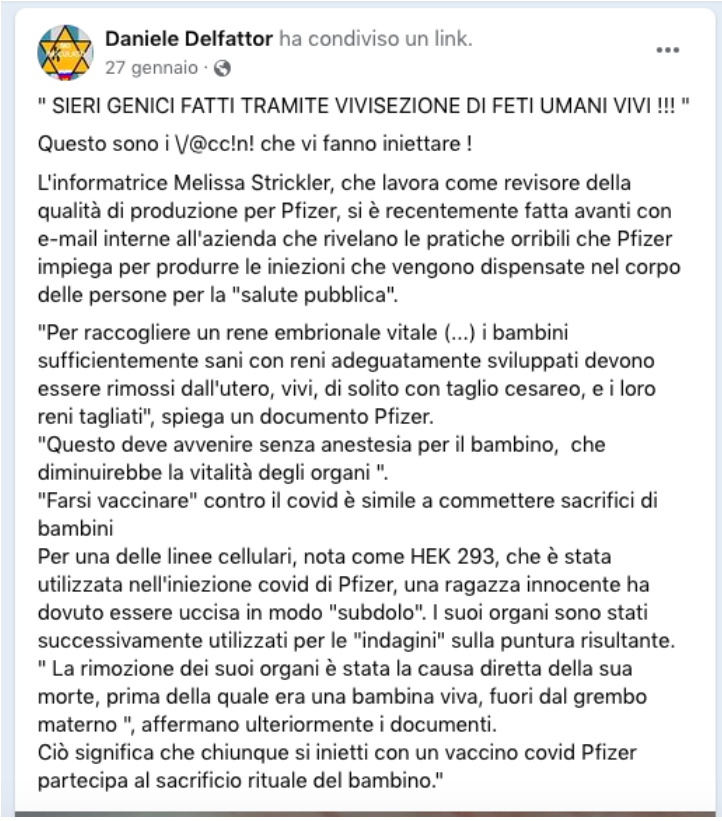
Source: Lifesitenews.com

The interview of the alleged Pfizer employee is shared on both webpages (e.g., Renovatio21) and social media. In particular, a Facebook post, dated January 27, claims the existence of "horrible practices that Pfizer employs to produce the injections that are dispensed into people's bodies for public health".

Fig. 4.6 Renovation21 article

Source: Renovatio21.com

Fig. 4.7 A Facebook post about the interview of Melissa Strickler



Source: Facebook.com

Tab. 4.6 Life cycle of a fake news about Covid-19 vaccine

Date	**Episode**	**Source**	**Sharing data**	**Link**
24/08/2020	Dr. Nick Coatsworth, the Australia's deputy chief medical officer, in a press conference addresses a question about ethical concerns regarding the use of cells derived from aborted fetuses in developing a leading COVID-19 vaccine	Press conference	n.a.	https://www.aap.com.au/factcheck/are-aborted-babies-being-used-for-a-covid-19-vaccine/
25/08/2020	A Facebook post claims "aborted babies are being used to develop a Covid-19 vaccine" by sharing the video by Dr. Coatsworth	Facebook post	More than 6.6k shares More than 970 reactions More than 800 comments 194k video views (AAP Factcheck)	https://www.facebook.com/Reubenjnr/posts/10157000373932131
15/11/2020	Facebook post by We are vaxxed claims: "aborted Male fetus in Covid 19 vaccine"	Facebook post	1.4k likes 1.6k comments 11k shares	https://archive.ph/DLcMJ#selection-1377.11-1377.49
18/11/2020	AP fact checked the fake news in reference to Astrazeneca	Associated Press website	n.a.	https://apnews.com/article/fact-checking-9730954855
27/12/2020	A Greek priest reiterates the fake news in reference to Pfizer during a ceremony	n.a.	n.a.	https://www.ellinikahoaxes.gr/2020/12/30/pfizer-sars-cov-2-vaccines-contain-human-aborted-fetus-cells-fake/
29/12/2020	The Greek priest statement is posted on YouTube	YouTube video	718 views	https://www.youtube.com/watch?v=dZrwnrqDA8M

30/12/2020	Ellinika Hoaxes reconstructs the story and fact checked the news	Ellinika Hoaxes website	n.a.	https://www.ellinikahoaxes.gr/2020/12/30/pfizer-sars-cov-2-vaccines-contain-human-aborted-fetus-cells-fake/
02/02/2021	The organization FactChekiNI fact checked the news	FactChekiNI website	n.a.	https://factcheckni.org/topics/health/covid-19-vaccines-and-aborted-fetuses/
14/10/2021	The Lifesite webpage published an interview of Melissa Strickler, presented as a former Pfizer employee, supporting the fake news	Lifesite webpage	n.a.	https://www.lifesitenews.com/news/bombshell-pfizer-whistleblower-says-vaccine-glows-contains-toxic-luciferase-graphene-oxide-compounds/
17/10/2021	Renovatio21 webpage shared the Lifesite interview about Pfizer	Renovatio21 webpage	n.a.	https://www.renovatio21.com/pfizer-e-le-cellule-di-aborto-del-vaccino-mrna/
27/01/2022	Facebook post about the aforementioned interview was published	Facebook post	n.a.	https://www.facebook.com/groups/682615299170017/posts/1100981010666775/
24/11/2021	The European Times publishes the news of the removal of the Greek priest from his role	The European Times	n.a.	https://www.europeantimes.news/it/2021/11/14-sacerdoti-fuori-dalla-chiesa-in-grecia-per-aver-rifiutato-un-vaccino/?amp=1

Source: Author's elaboration

Certified attack on what company is

The second type of fake news attack on companies that I identified with this research is the "certified attack on what company is", and includes fake news that, starting from the

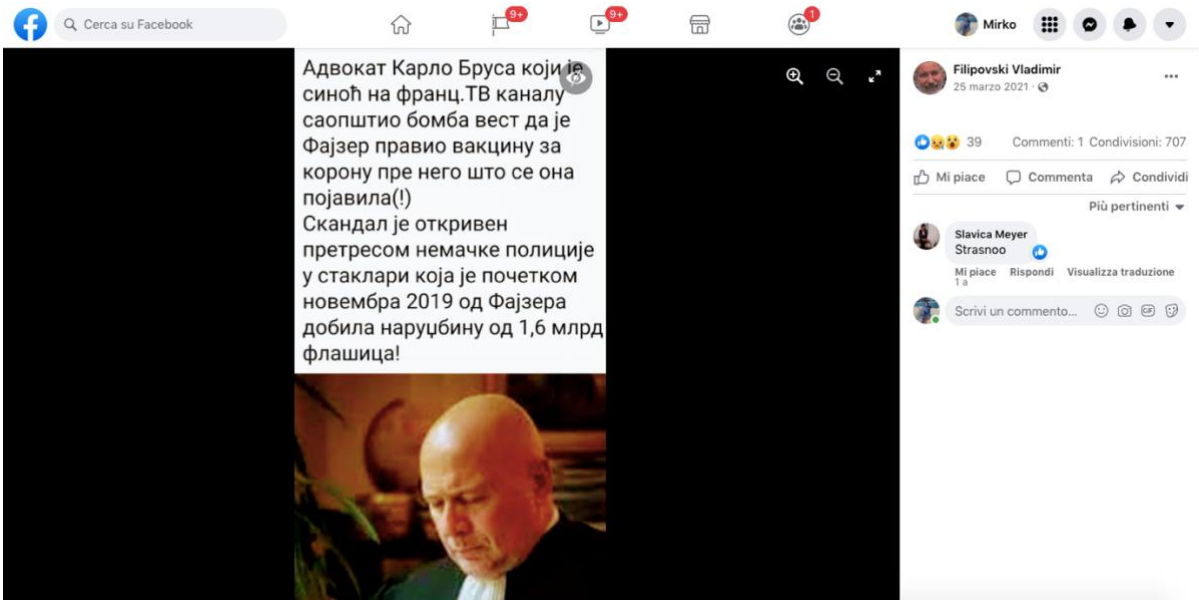
credibility of institutions (e.g., scientists, researchers, doctors in the case vaccines against Covid-19), launch an attack on corporate values and identity:

> *"The scandal was revealed by the German police with a search of a glassware factory, which at the beginning of November 2019 received an order from Pfizer for 1.6 million vaccine bottles."*

For example, a fake news according to which the company Pfizer produced Covid-19 vaccine in the pre-pandemic has spread on the web. This fake news becomes viral when, in a post published on the social network Facebook and shared over 750 times, it is alleged that the lawyer Carlo Brusa announced on a French television channel that the pharmaceutical company Pfizer started producing the vaccine against Covid-19 before the disease manifested.

The Facebook post (Fig. 4.8) states: "The scandal was revealed by German police with a search of a glass case, which received an order from Pfizer for 1.6 million bottles in early November 2019, the post says."

Fig. 4.8 Facebook post about Pfizer fake news



Source: Facebook.com

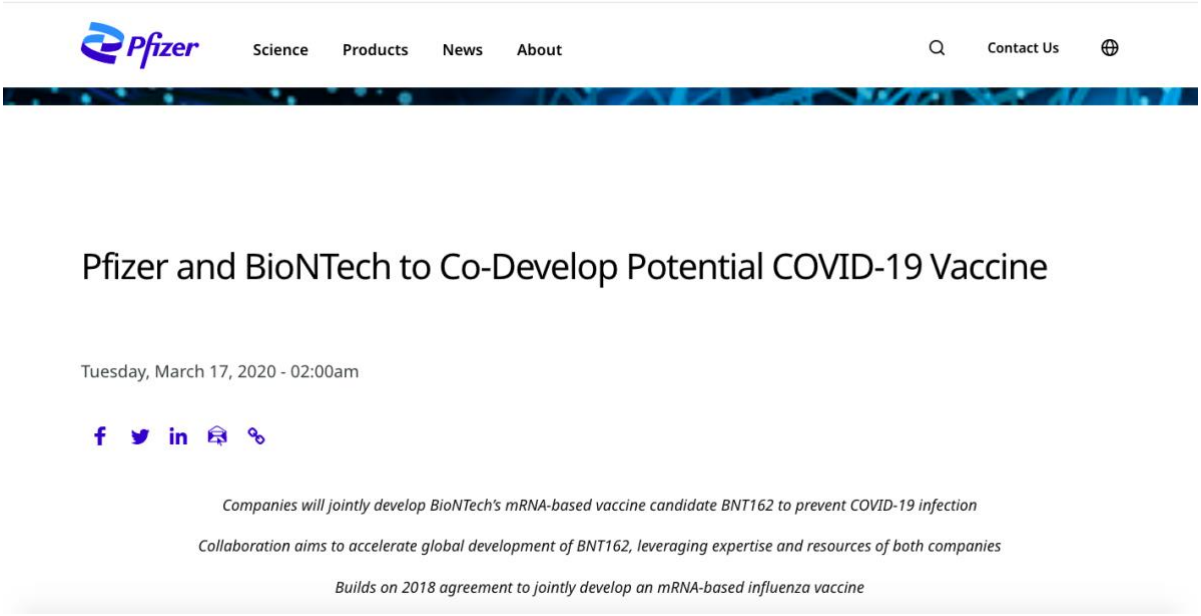
According to Franceinfo.fr, in fact, on a French television channel, the defense lawyer for anti-vaccines Carlo Brusa states that the laboratories have ordered double the 800 million glass vials that from November 2, 2019 will have to contain at -100 °C.

According to this conspiracy theory, the two companies Pfizer and BioNTech had predicted the pandemic even before the Coronavirus was identified. Carlo Brusa cites as evidence a German general intelligence investigation into the matter and a raid on Pfizer and BioNTech offices. Actually, these revelations do not exist on any press source – the first source to mention this incident is a French blog, on December 27, which assures that the Bundesnachrichtendienst, the federal intelligence services, raided the BioNTech laboratory headquarter and the company Schott. The text, however, was deleted from the French blog.

Following the dissemination of this fake news, the Schott company has formally denied having been heard by the secret services and claims it only provided vials for the vaccine in 2020 (Franceinfo.fr, 2021). Moreover, the fact-checking website Vistinomer, by considering a Pfizer press release, states that on March 17, 2020, Pfizer and BioNTech teamed up for the first time to create a potential Covid-19 vaccine.

Pfizer, in fact, on March 17, 2020 published a press release (Fig. 4.9): “Companies will jointly develop BioNTech’s mRNA-based vaccine candidate BNT162 to prevent COVID-19 infection. Collaboration aims to accelerate global development of BNT162, leveraging expertise and resources of both companies. Builds on 2018 agreement to jointly develop an mRNA-based influenza vaccine.”

Fig. 4.9 Pfizer press release



Source: Pfizer.com

Hence, the two companies, Pfizer and BioNTech, have been working together since 2018 and trying to create an mRNA vaccine against influenza, but after the Covid-19 pandemic spread around the world in early 2020, they all had the resources that had put into operation the mRNA flu vaccine, decide to put them into operation to create a vaccine against Covid-19.

“We are proud of our fruitful partnership enabling our companies to be able to mobilize collective resources with exceptional speed in anticipation of the global challenge”, said Michael Dolsten (Pfizer).

“With our partner Pfizer, we believe we can keep the vaccine in our efforts to make it available against Covid-19 to people around the world who need it”, according to Ugur Sahin, owner of BioNTech.

Both statements by the managers were posted on Pfizer website, which was followed on April 9, 2020, by an announcement from the two companies regarding the progress of this collaboration (Fig. 4.10).

Fig. 4.10 Pfizer announcement about progress

Source: Pfizer.com

On April 22, 2020, Pfizer and BioNTech, again in an official statement published on their official website, announced that they have received regulatory clearance from German authorities to begin clinical trials of four Covid-19 vaccine candidates.

On April 29, 2020, Pfizer and BioNTech announced that they had determined the dose of the vaccine and, on May 5, 2020, the first vaccines in the USA were administered to participants as part of a clinical trial. The first positive results of this vaccination were recorded on 1 July, 2020. This is followed by the positive outcomes of the vaccine in Germany in all phases of the clinical trial, obtaining further approvals from the US Drug Agency and the European Union. The vaccine was subsequently distributed worldwide, and Pfizer and BioNTech are now evaluating how their vaccine will affect Covid-19 mutations. It is, therefore, evident that the study of the vaccine against Covid-19 by Pfizer and BioNTech began in March 2020 and not before the start of the pandemic, as falsely stated by the contents circulated on the Net.

Tab. 4.7 Life cycle of a fake news about Pfizer and BioNTech

Date	Episode	Source	Sharing data	Link
17/03/2020	Pfizer announces that it has started a collaboration with BioNTech to study a vaccine against Covid-19	Pfizer press release	n.a.	https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-announce-further-details-collaboration
15/01/2021	Franceinfo fact-checked the fake news about the Pfizer and BioNTech collaboration to provide a Covid-19 in the pre-pandemic era	Franceinfo.fr website	n.a.	https://www.francetvinfo.fr/sante/maladie/coronavirus/vaccin/desintox-vaccin-covid-19-non-les-laboratoires-pfizer-et-bio-n-tech-n-ont-pas-prevu-la-pandemie-depuis-2019_4259005.html
15/01/2021	Schott company has formally denied having been heard by the secret services and claims it only provided vials for the vaccine in 2020	Franceinfo.fr website	n.a.	https://www.francetvinfo.fr/sante/maladie/coronavirus/vaccin/desintox-vaccin-covid-19-non-les-laboratoires-pfizer-et-bio-n-tech-n-ont-pas-prevu-la-pandemie-depuis-2019_4259005.html
25/03/2020	Facebook post states: “The scandal was revealed by German police with a search of a glass case, which received an order from Pfizer for 1.6 million bottles in early November 2019, the post says.”	Facebook.com	Shared over 750 times	https://vistinomer.mk/wp-content/uploads/2021/04/1-facebook-asdas-dasd-dasd-001-crop-final.png

03/04/2021	Vistinomer fact-checked the fake news by reconstructing all Pfizer corporate communications (i.e. press releases) relating to the collaboration with BioNTech in combating the health emergency	Vistinomer website	n.a.	https://vistinomer.mk/fa%d1%98zer-i-biontek-ne-pochnale-da-%d1%98a-proizveduvaat-vakcinata-protiv-kovid-19-ushte-pred-pandemi%d1%98ata/

Source: Author's elaboration

4.4.3 Fake news' attack strategies on company behavior

Bottom-up attack on company behavior

The third type of fake news analyzed for this study were labeled as "bottom up attack on company behavior". Specifically, as anticipated in the previous paragraphs, the fake news belonging to this cluster try to hit the behavior of companies, what the company does, using the credibility of peers (bottom up):

"A man claims that the Pfizer vaccine will cause either Guillain-Barré syndrome or cancer. It will modify your DNA and that Christians do not accept it."

For example, in recent months a fake news has circulated on social media and on the Internet that the vaccine produced by the pharmaceutical company Pfizer increases the possibility of getting cancer in patients.

This fake news dates back to 2021 - already in September of the same year, some posts shared an article published by LifeSite News entitled: "The Dr. Idaho reports a 20-fold increase in tumors in vaccinated patients" (Fig. 4.11).

Fig. 4.11 LifeSite News article

Source: LifeSite News

Fig. 4.12 LifeSite News article

Source: LifeSite News

Interestingly, although in its latest forms this fake news has resorted to peer credibility, it originally mentioned a scientific source, namely a video statement from Dr. Ryan Cole, who talks about the rise in cancer cases in a tweet. In the video, Dr. Cole claims to see an increase in herpes, shingles, mononucleosis, human papillomavirus, cervical biopsies, and molluscum contagiosum. Specifically, Dr. Cole states: “We’re literally weakening the immune system of these individuals. Now, most concerning of all, is there is a pattern of these types of immune cells in the body that keep cancer in check. Well, since January 1, in the laboratory I’ve seen a 20 times increase of endometrial cancers over what I see in an annual basis. A 20 times increase. I’m not exaggerating at all”.

As reported by Reuters.com (which checked the fake news on November 12), in December 2021, local news organization Idaho Capital Sun reported that: “The American Board of Pathology urged the Washington Medical Commission to consider the actions of Cole, who is licensed to practice in Washington and previously told the Idaho Capital Sun he prescribed medications including ivermectin to at least one patient in Washington, via telehealth”.

Fig. 4.13 Reuters news

Source: Reuters.com

Cole has been previously criticized for spreading misinformation related to the Covid-19 pandemic, including an instance where he referred to Covid-19 vaccines as "needle rape".

Tab. 4.8 Life cycle of a fake news about Pfizer

Date	**Episode**	**Source**	**Link**
07/05/2021	Facebook removes Life Site News website for 'misleading' Coronavirus information	The Washington Post	https://www.washingtonpost.com/religion/facebook-ban-lifesite-covid/2021/05/07/638a4768-af48-11eb-acd3-24b44a57093a_story.html

25/08/2021	On Twitter, Dr. Cole published a video arguing to see an increase in herpes, shingles, mononucleosis, human papillomavirus, cervical biopsies, and molluscum contagiosum	Twitter.com	https://twitter.com/ToTheLifeboats/status/1430589141344034816
13/09/2021	Life Site News published a fake news in which it argued that Pfizer vaccine will cause cancer	Life Site news	https://archive.ph/zHhGG
13/09/2021	Health Feedback fact checked the fake news about Pfizer vaccine will cause cancer	Health Feedback	https://healthfeedback.org/claimreview/no-scientific-evidence-for-claim-by-pathologist-ryan-cole-that-covid-19-vaccines-weaken-the-immune-system/
19/09/ 2021	On social media such as Facebook, the aforementioned fake news has gone viral	Social media (i.e., Facebook)	https://www.facebook.com/1016625795056092/posts/4659993554052613
19/10/2021	Experts at Meedan's Health Desk explained that experts found no evidence linking the vaccines to cancer or HIV	Health Desk	https://health-desk.org/articles/there-is-no-evidence-linking-covid-19-vaccines-with-cancer
12/11/2021	Reuters.com fact checked the fake news about Pfizer vaccine will cause cancer	Reuters.com	https://www.reuters.com/article/factcheck-coronavirus-cancer/fact-check-no-evidence-covid-19-vaccines-cause-cancer-idUSL1N2S322C

08/12/2021	Cole Diagnostics were removed from the St. Luke's Health Partners network, a network of health care providers supporting 160,000 Idahoans	Idaho Capital Sun (a local news organization)	https://idahocapitalsun.com/2021/12/08/dr-ryan-cole-removed-from-one-of-idahos-largest-health-care-networks/
16/12/2021	The American Board of Pathology urged the Washington Medical Commission to consider the actions of Cole, who is licensed to practice in Washington and previously told the Idaho Capital Sun he prescribed medications including ivermectin to at least one patient in Washington, via telehealth	Idaho Capital Sun (a local news organization)	https://idahocapitalsun.com/2021/12/16/idaho-doctors-pathology-board-accuse-dr-ryan-cole-of-endangering-public-health/
07/02/2022	Associated Press (APNews) fact checked the fake news about Pfizer vaccine will cause cancer	Associated Press News	https://apnews.com/article/fact-checking-228836931193
10/02/2022	FactCheck.org fact checked the fake news about Pfizer vaccine will cause cancer	FactCheck.org	https://www.factcheck.org/2021/04/scicheck-idaho-doctor-makes-baseless-claims-about-safety-of-covid-19-vaccines/
11/02/2022	Dr. Gigi Gronvall, immunology expert and	Reuters.com	https://www.reuters.com/article/factcheck-cancer-covid-idUSL1N2UM24J

	senior scholar at the Johns Hopkins Center for Health Security told Reuters via email that T cells do not work as described by Dr. Cole		
11/02/2022	Dr. Andrew Badley, an infectious disease expert and head of Mayo Clinic's COVID-19 Task Force, also told Reuters via email the COVID-19 pandemic has caused people to delay non-urgent healthcare tasks, which results in diseases that potentially would have been caught at early stages now presenting at more advanced stages with more challenges	Reuters.com	https://www.reuters.com/article/factcheck-cancer-covid-idUSL1N2UM24J

Source: Author's elaboration

Certified up attack on company behavior

The third type of analyzed fake news is the one that uses the certified credibility, i.e. the credibility of authoritative, certified sources (e.g., institutional sources, scientists, researchers) to attack what the company does:

"Nick Janakis, professor of pulmonology at the University of Crete stated that the odds of developing thrombosis from the AstraZeneca vaccine are not small"

Among the fake news that we have labeled as "certified up attack on company behavior", there is a news that the Astrazeneca vaccine would pose risks of thrombosis for patients. To support

this thesis, according to this fake news, there would be Nick Janakis, a professor of pulmonology at the University of Crete. However, by reconstructing the life cycle of this fake news, it is interesting to note how the fake news has evolved over the months and has, for example, changed the subject of the attack (i.e., several pharmaceutical companies have been hit) and the alleged supporters of the accusatory thesis. In these fake news, hence, the relation between Covid-19 and thrombosis is complex.

Because of the different forms that this fake news has taken over time, reconstructing its life cycle is particularly complex even for fact checker organizations. For example, Reuters.com claims that posts have started to spread on social media stating that Italy defeats the so-called Covid-19, which is nothing more than diffuse intravascular coagulation, that is thrombosis. According to these social media posts, Italian doctors have disobeyed the WHO law banning the autopsy of Coronavirus corpses, as they discovered that it is not a virus but the bacteria that cause death and the formation of blood clots.
Indeed, as can be seen in the following figure and, in more detail, as reported in the life cycle table of this fake news, some social media posts (Fig. 4.14) have claimed that some airlines would have warned people who have been vaccinated for Covid-19 not to fly because they have an increased risk of developing blood clots.

Fig. 4.14 Melina Richards tweet

Source: Twitter.com

Fig. 4.15 Melinda Richards tweet (fact-checked)

Source: Factcheck.afp

The aforementioned news was promptly denied by several debugging sites, such as AFP Fact Check (see Fig. 4.16).

Fig. 4.16 AFP news

Source: Factcheck.afp

Tab. 4.9 Life cycle of a fake news about Covid-19 and thrombosis

Date	**Episode**	**Source**	**Link**
21/05/2020	The British Medical Journal (BMJ) states that doctors are seeing high rates of blood clots in patients who are seriously ill with COVID-19. It explains that "a Covid patient's blood is enormously sticky" because the disease has increased the liver's production of clotting factors	The British Medical Journal	https://www.bmj.com/content/369/bmj.m2058
28/05/2020	Reuters.com fact checked the fake news about Covid-19 and thrombosis by arguing that "Covid-19 is not the same as thrombosis. It is caused by a virus not bacteria. The symptoms of Covid-19 can be treated with anticoagulants and anti-inflammatories, but antibiotics are not effective against the viral infection, and are only recommended for Covid-19 patients who also have a bacterial infection."	Reuters.com	https://www.reuters.com/article/idUSKBN2343F5
01/07/2020	A study in the Journal of the American College of Cardiology found that that	Journal of the American	https://www.jacc.org/doi/10.1016/j.jacc.2020.05.001?_ga=2.1

	systemic anticoagulants “may be associated with improved outcomes among patients hospitalized with COVID-19”, but that any potential benefits must be weighed against the risk of bleeding	College of Cardiology	06292547.1126773128.1590577067-467931639.1590577067
25/05/2021	The International Air Transport Association (IATA), which represents 290 airlines worldwide including Russia’s largest airline Aeroflot and Spain’s largest airline Iberia, told AFP it was not aware of any airlines “considering denying vaccinated passengers travel due to the blood clot risk”	AFP Fact Check	https://factcheck.afp.com/doc.afp.com.32AW8XU
28/06/2021	A fake news about Covid-19 and thrombosis was debunked by AFP 2021 after commentator and former Australian senator Cory Bernardi claimed on a Sky News Australia TV segment that “airlines in Spain and Russia are warning people who’ve been	AFP Fact Check	https://factcheck.afp.com/http%253A%252F%252Fdoc.afp.com%252F9DC8XM-1

	vaccinated against coronavirus not to travel because of the risk of blood clots".		
06/07/2021	The International Air Transport Association (IATA) publishes a press release to advis that their medical advisory group had not considered vaccine-induced blood clots to be of risk	IATA.org	https://www.iata.org/en/pressroom/pr/statement-misinformation-vaccinated-passengers/
07/08/2021	Italian ISS fact checked the fake news about Covid-19 and thrombosis by arguing that "all drugs and vaccines can have side effects. The regulatory agencies report these two pathologies, which are also among those caused by the infection, as rare adverse effects of vaccination. Precisely because of their extreme rarity, these effects still leave the benefit-risk ratio in favor of the former, as noted by all the international regulatory agencies	Italian ISS website	https://www.iss.it/primo-piano/-/asset_publisher/3f4alMwzN1Z7/content/covid-dall-iss-un-vademecum-contro-le-fake-news-sui-vaccini

08/05/2022	A tweet by Melinda Richards claims: “Airlines in Spain and Russia are warning COViD vaccinated people not to fly due to the increased risk of blood clots”	Twitter.com	https://twitter.com/goodfoodgal

Source: Author’s elaboration

4.5 Highlights and remarks

The findings of this research presents both a theoretical contribution and managerial implications. Indeed, although previous studies investigated the impacts of fake news on companies by adopting a corporate communication perspective (e.g. Visentin et al., 2019; Di Domenico et al., 2021), this is the first research which focuses on fake news attacking strategies to corporate reputation, also by considering the fake news life cycles. Specifically, this study contributes to the academic literature of fake news by identifying the ways in which these attacks tried to question pharmaceutical firms in the digital environment during the Covid-19 diffusion worldwide.

Particularly, with the QCA two types of borrowed credibility were identified on which fake news leverages and two thematic clusters that characterize them. By crossing these dimensions, I found four different ideal types of fake news attack strategies, that are:
(1) *bottom-up attack on what company is:* fake news which attacks the corporate character reputation by leveraging corporate values ;
(2) *certified attack on what company is*: fake news that attacks the character corporate reputation by using the borrowed documental or authority credibility, which affect the values of companies or their corporate identity;
(3) *bottom-up attack on company behavior*: fake news that attacks the capability reputation by using the borrowed peer credibility to question certain company procedures and behaviors;
(4) *certified attack on company behavior*: fake news that attacks the capability reputation by using the documental or authority credibility.

To deepen these four attacking strategies and to explore the evolution of fake news over the time, four longitudinal case studies were conducted. This analysis highlighted the weakness of the role of fact checkers, that are unable to access the filter bubbles in which fake news spreads rapidly. According to the results of case studies, in fact, fact checkers and fake news branch out on two parallel channels, without crossing each other, and reaching different audiences, by representing an ethical challenge for digital platforms such as social media.

In addition, the capability of fake news to change their form quickly complicates the work of fact checkers and threatens the communication of organizations. In fact, from the results of the case studies, it emerges that fake news is born in a certain format (e.g., as an image or video) and is transformed over the time (e.g., they become textual content by penetrating user conversations, etc.).

As anticipated in the methodology chapter, to investigate the perception of Italian adults about the fake news phenomenon and to identify the more effective response to stem fake news, the following chapter presents the results of the research project "Fake news: perceptions, actors and strategies" by Romenti, Colleoni, Olivieri and Simunovic (2022).

Chapter 5.
Key Actors and Response Strategies to the Fake News' Phenomenon

5.1 Introduction

As emerged from the systematic literature review illustrated in Chapter 1 of this thesis, the logics of the web, unlike those of traditional media which provide control filters and fact-checking of news (Allcott & Gentzkow, 2017), allow anyone to share unverified content within its digital spaces. In addition, thanks to the alleged anonymity guaranteed by the rules of social media, false content can be spread quickly without the authorship of what is written being easily attributable to an individual or to a specific organization. For these reasons, the phenomenon of disinformation nowadays represents a threat not only for information systems, but also for organizations, companies and institutions whose communication has moved in recent decades from traditional to online channels. In recent years, in fact, several corporate communication and marketing management scholars have approached the issue of fake news by studying the ways in which these contents endanger brands (Berthon et al., 2018), the consumer responses to the diffusion of fake news (Wisker, 2021) and, finally, focusing on the influence of fake news on users purchase intentions (Visentin et al., 2019).

Therefore, the aim of research is twofold: on the one hand, to investigate the perception of citizens with respect to fake news and, in particular, how salient this phenomenon is considered, those responsible for the dissemination of false news and who should work to stop it; on the other hand, to identify the corporate and institutional response communication strategies deemed most appropriate to mitigate the impact of fake news on the trust of Italian citizens.

As anticipated in the methodology chapter, the data reported in this chapter was analyzed by the IULM University research team coordinated by Stefania Romenti and formed by Elanor Colleoni, Mirko Olivieri and Denis Simunovic. This research is part of a larger project on fake

news phenomenon with the City University of New York (Prof. Naomi Gardberg), the University of Freiburg (Prof. Laura Illia) and the Kedge Business School (Prof. Stelios Zyglidopoulos).

The chapter is structured as follows. The following paragraph 5.2 illustrates the real and perceived degree of fake news knowledge. The par. 5.3 is focused on the capability of respondents to recognized fake news across digital channels. The par. 5.4 explains the results of the this research by focusing on the relationship between fake news and brands, products and services. Finally, highlights and remarks conclude the chapter.

The data was collected through the administration of a web questionnaire using the CAWI methodology. The questionnaire was administered to a sample of 500 panelists of the research company CINT. The main demographic variables of the sample are shown below: age (18+), gender, geographical origin.

Fig. 5.1 Sample age

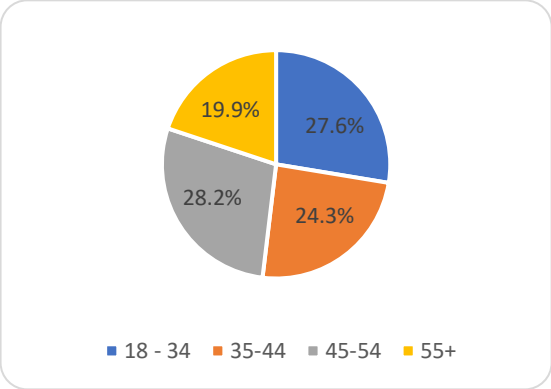


Fig. 5.2 Sample gender

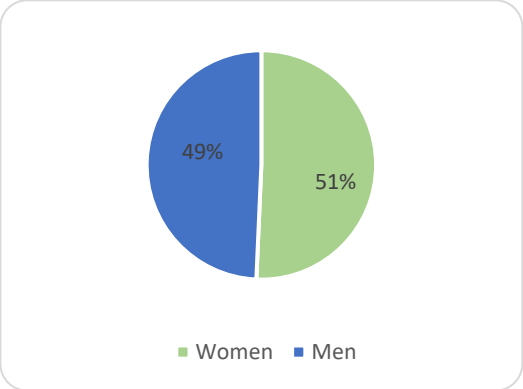
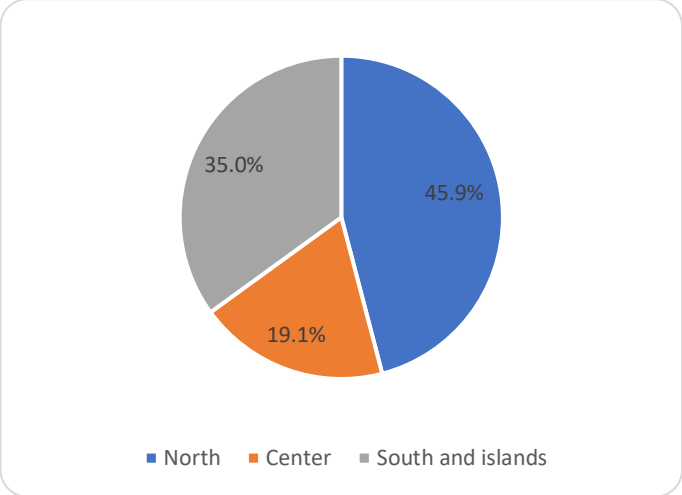


Fig. 5.3 Sample geographical origin



5.2 Knowledge and perception of fake news

The first objective of the research is to identify the degree of citizens' knowledge of fake news, and in particular not only with respect to the perception of the seriousness of the phenomenon, but also to the diagnostic and corrective behaviors used in order to limit the fake news circulation and impact.

5.2.1 Real and perceived degree of fake news knowledge

In general, the results of this study show that the respondents believe they have a high degree of knowledge of the fake news phenomenon: in fact, while 36.8% of the respondents believe they have a moderate knowledge of the phenomenon, almost half of the sample (48.7%) think they know fake news well or extremely well. Only the 2.6% of respondents said they didn't know fake news at all (Fig. 5.4).

Fig. 5.4. Which is your level of knowledge of fake news?

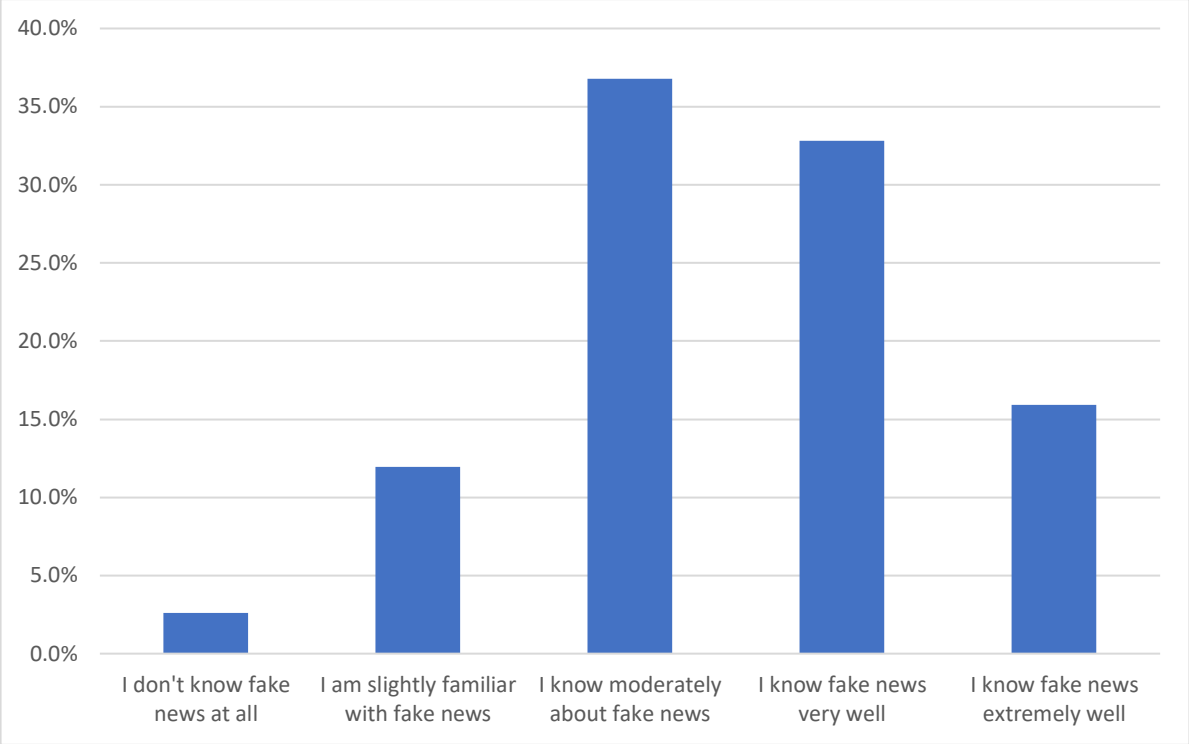
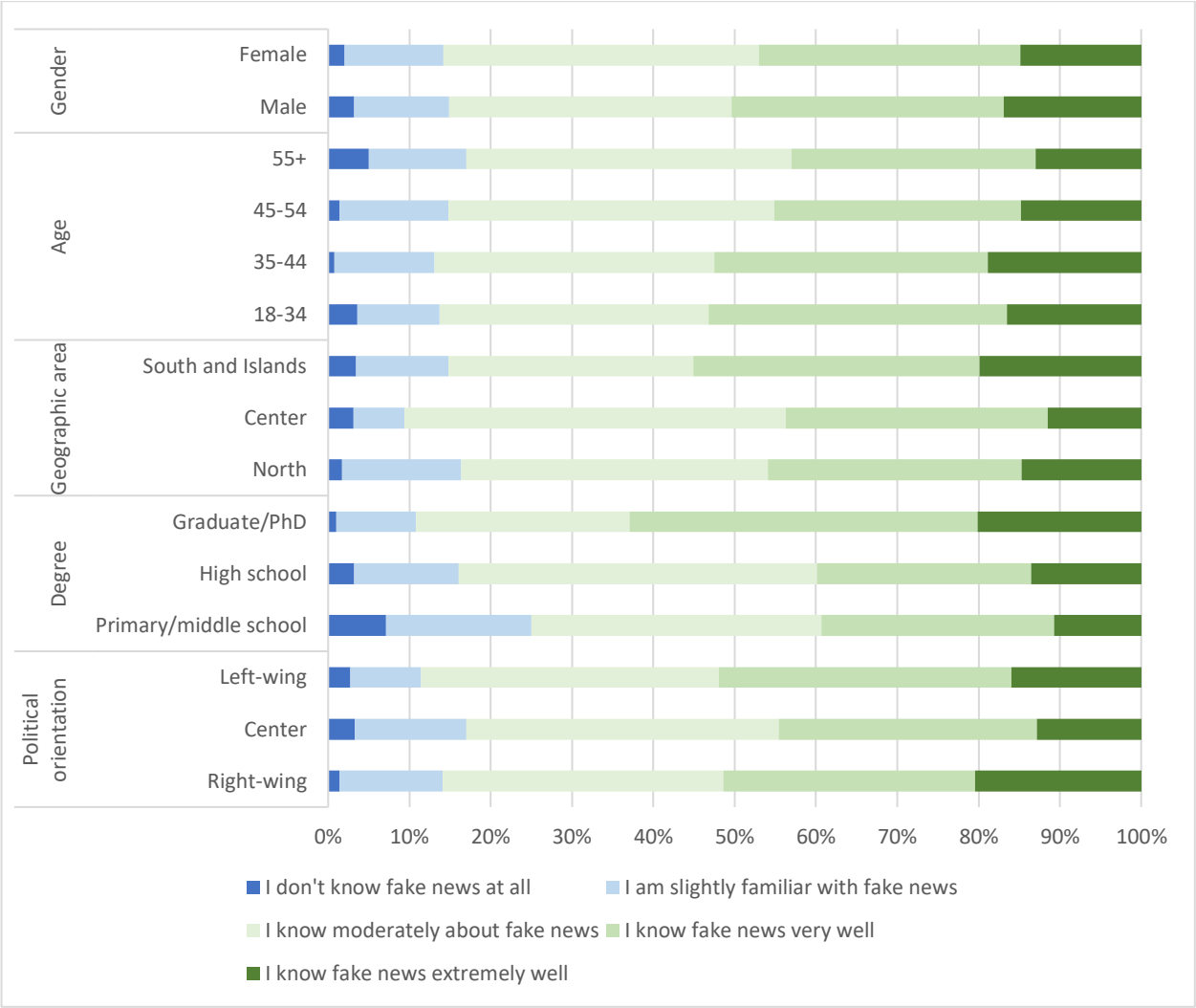


Figure 5.5 describes the perceived degree of awareness of fake news in the light of different demographic characteristics of the respondents, such as gender, age, geographical area, educational qualification and political orientation. The percentages reported with reference to gender, age, geographical area or political orientation of the respondents do not seem to deviate significantly from the general values of the sample. On the other hand, significant differences are observed in terms of educational qualifications. In particular, Figure 5.2 shows how people with primary or middle school qualification perceive a lower degree of knowledge of the fake news phenomenon (7.1% compared to 2.6% of the sample average).

Fig. 5.5. Which is your level of knowledge of fake news?



Despite the perceived high degree of knowledge with respect to fake news reported in Fig. 5.4 and in Fig. 5.5, when respondents are then questioned about the meaning of the term fake news, only 41.2% give the correct answer and show that they have clear ideas (Table 5.1). Similar results are obtained with respect to the definition of disinformation which is indicated correctly only in 22.5% of cases, and of misinformation which is indicated correctly only in 36.4% of cases.

Tab. 5.1. Fake news definition

	Percentage of correct answers
Misinformation: False information disseminated without the intent to harm a person or organization (Wardel and Derakhshan, 2017).	36.4%
Disinformation: Misleading information deliberately disseminated with the intent to harm an individual or organization (Nielsen and Graves, 2017).	22.5%
Fake news: False information created and disseminated specifically with the intention of harming a person or organization (Lazer et al., 2017).	41.2%

Figure 5.6 shows the percentage frequencies of perceived exposure to fake news, both at the sample level and in detail with respect to the different demographic characteristics of the respondents. Compared to the total number of respondents, Figure 5.3 shows that 60% of respondents declare that they come across fake news at least once a week. Instead, only 16.8% of respondents believe that they rarely or never come across fake news.

There are no significant differences by gender, geographical area or political orientation. Also in this case, however, differences by educational level are observed. In particular, people with a primary/middle school degree perceive themselves as more exposed to fake news, with 52% of respondents in that range (about 22 percentage points more than the total respondents) declaring they are exposed several times a day to fake news.

Fig. 5.6. How often do you came across fake news?

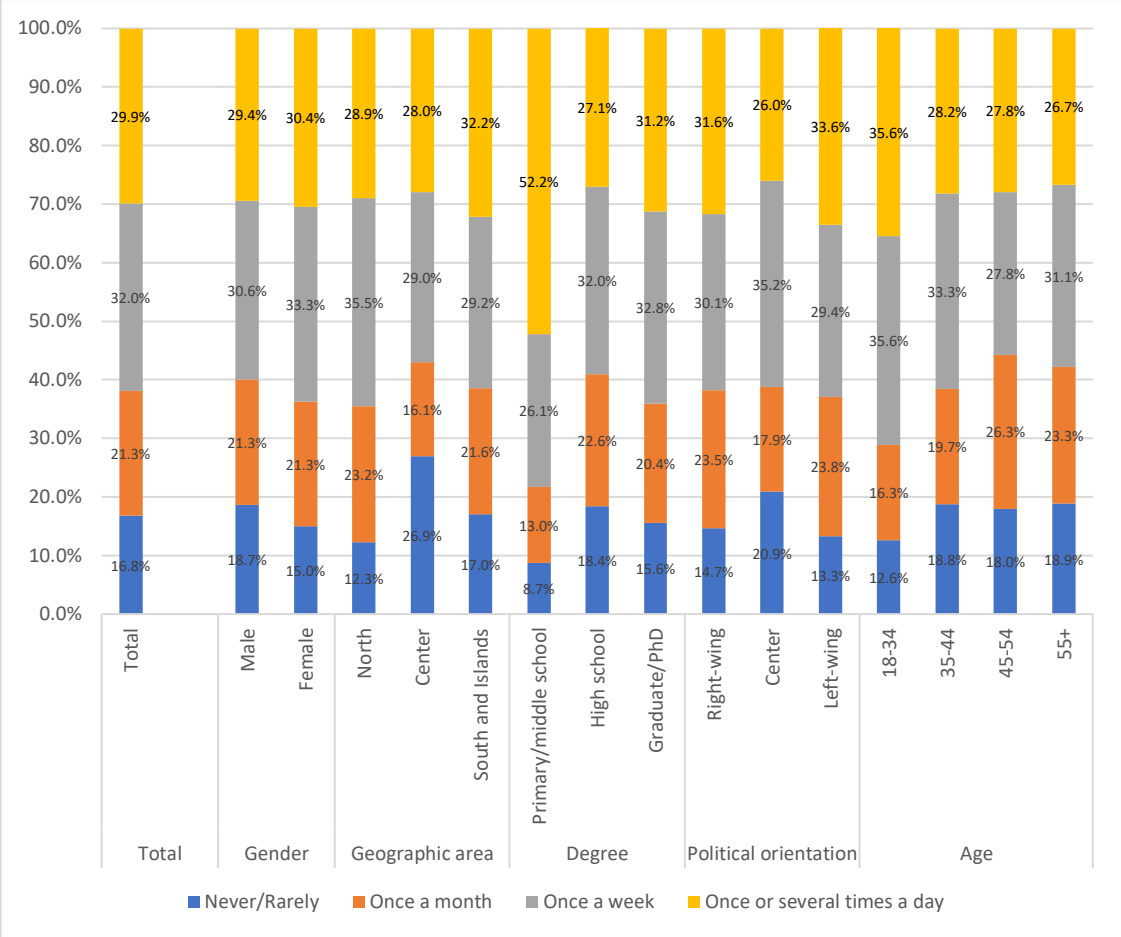
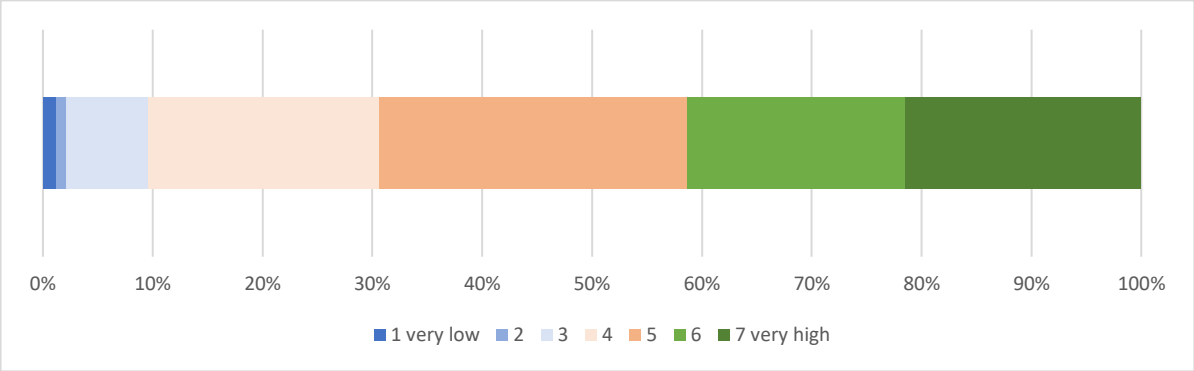


Figure 5.7 shows the level of seriousness perceived by the respondents with respect to fake news. Findings clearly reveal how fake news are considered an extremely serious problem (values 6-7 on a scale of 1-7) by almost half of the respondents (41.4%), a medium serious problem by around 49% of respondents (values 4-5 on a scale of 1-7). Only 9.5% of respondents consider fake news a low-severity problem (values 1-2-3 on a scale of 1-7).

Fig. 5.7. What level of seriousness do you attribute to the fake news problem (deliberately false news) in Italy?



5.2.2 The fake news issue in Italy

Figure 5.8 shows the level of seriousness perceived by respondents with respect to fake news in the light of the different demographic characteristics. Regarding the gender, the figure shows how women tend to see fake news as more serious (values 6-7 around 44 and values 1-2-3 around 8 percentage points) compared to men (values 6-7 around 38 and 1-2-3 values around 12 percentage points). Regarding the age of the respondents, people in the 55+ age group rate fake news (47 percentage points) more seriously than other age groups (40 percentage points). There are also significant differences in political orientation. In fact, people who have declared themselves to be on the right area tend to perceive the phenomenon of fake news as less serious than people who have declared themselves to be on the left political area and the center political area. Finally, regarding the educational qualification, it appears that people with high and low qualifications have a similar and lower perception of the seriousness of fake news, compared to people with an average level of education (i.e. high school diploma).

Fig. 5.8. What level of seriousness do you attribute to the fake news problem (deliberately false news) in Italy?

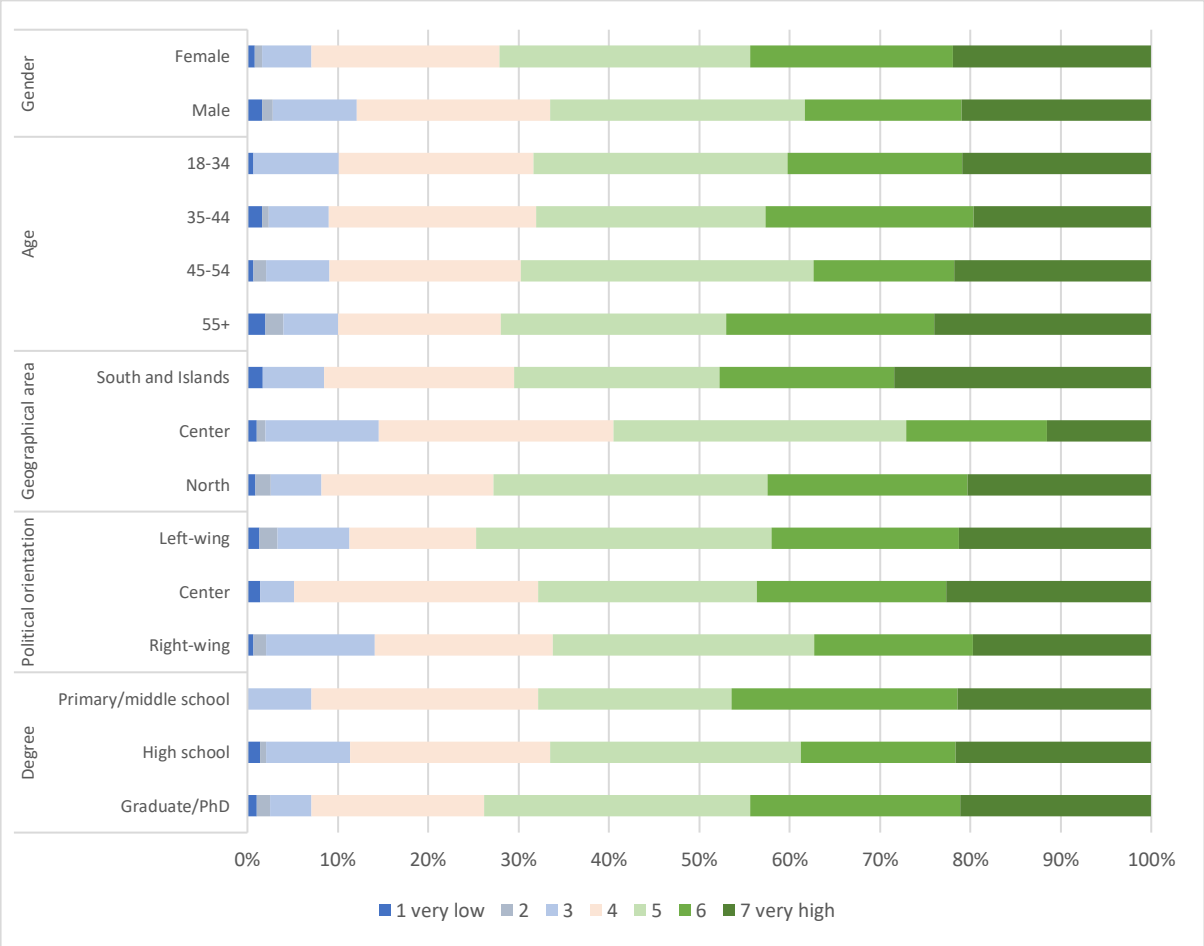


Figure 5.9 shows the relationship between the level of perceived severity of fake news and communication channels and the frequency of use of the channels. From this figure, it can be seen that people who assiduously use the various communication channels show a systematically higher level of perceived seriousness of fake news, compared to those who declare a low use of the channels. Furthermore, the figure shows that people who frequently use digital media, and in particular social networks, perceive fake news to be more serious than those who are more exposed to traditional media such as magazines, newspapers, radio and television.

Fig. 5.9. What level of seriousness do you attribute to the fake news problem (deliberately false news) in Italy?

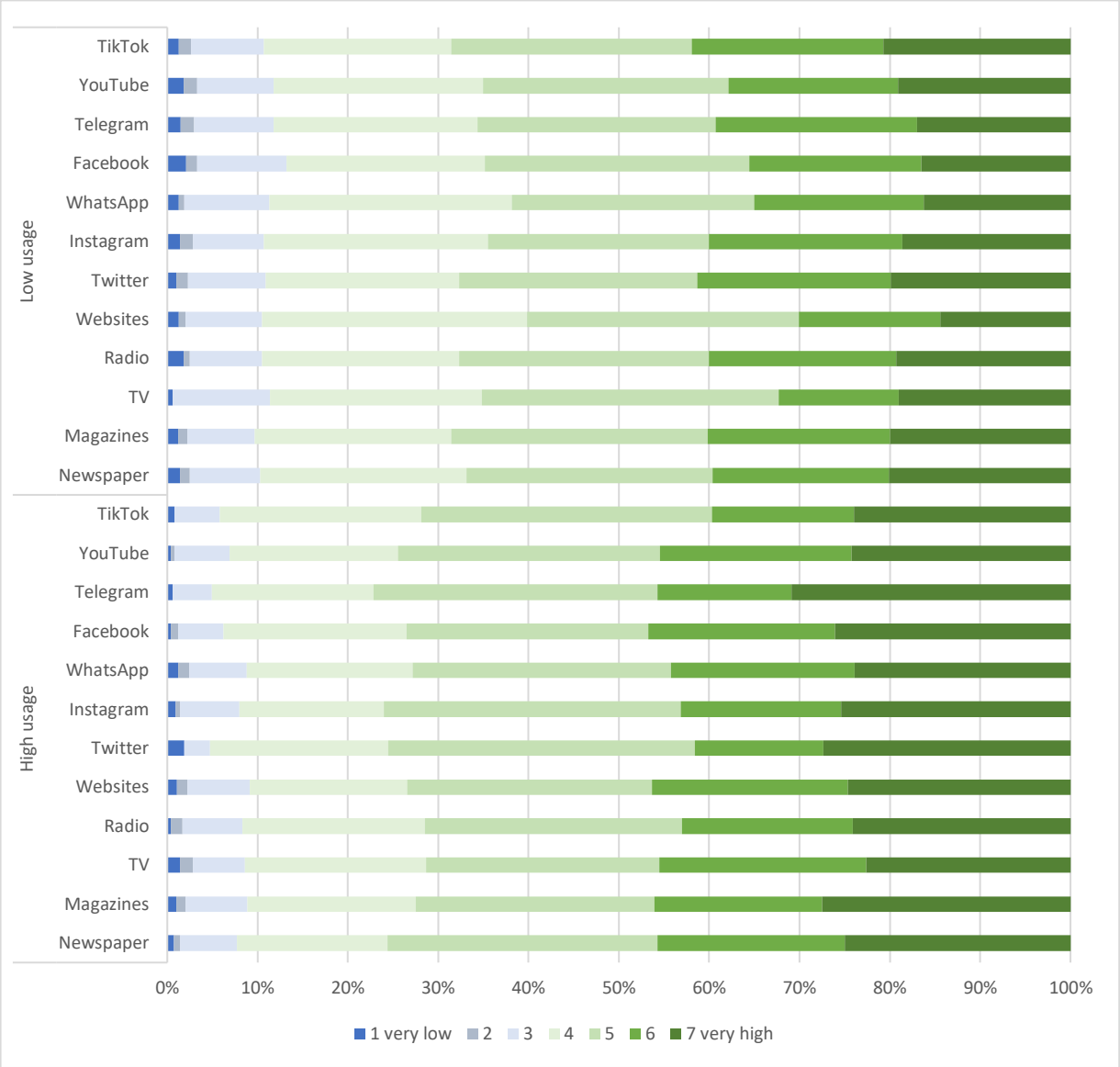


Table 5.2 shows the perception of seriousness of fake news and low quality information compared to other social, economic, political and environmental problems, in general in the sample and by age group. In the sample, among the most serious problems are those of an economic and social nature, such as family poverty and the health system, crucial elements that emerged from the Covid-19 crisis (total position). Fake news and poor quality information rank about halfway down the list of problems in terms of perceived severity. Fake news and poor quality information (7th position) are in fact perceived as serious almost on a par with

organized crime (6th position), and more serious than illegal immigration (8th position). Fake news are perceived more seriously in the two central age groups (35-44 and 45-54) where they are placed respectively in 5th and 6th position. The 55+ age group is the one that perceives the problem of fake news as less serious, placing them in 9th position of importance out of 13 total issues.

Tab. 5.2. In your opinion, what are the main problems existing today in Italy?

Topic	**Total**	**18-34**	**35-44**	**45-54**	**55+**
Poverty of Italian families	1	2	1	1	1
Sanitary sistem	2	3	2	3	6
National debt	3	6	4	2	3
Violence	4	1	7	5	4
Climate change	5	5	3	7	2
Organized crime	6	8	6	4	5
Poor quality of information and fake news	7	7	5	6	9
Clandestine immigration	8	9	9	8	7
Discrimination	9	4	8	9	8
Poor education	10	10	10	10	10
Narcotic substances	11	13	13	11	12
Privacy	12	11	11	13	11
Cybersecurity	13	12	12	12	13

Table 5.3 shows the topics covered by fake news according to the respondents. The majority of respondents indicate the greatest presence of fake news in information on illegal immigration (11.8%). Slightly lower is information on the health system (11.6%), which was one of the main targets of fake news during the COVID-19 period. Fake news is also reported as often connected to issues concerning forms of discrimination (10.8%), followed by climate change (10.1) and national debt (8.0%).

Tab. 5.3. On which of the following topics do you think fake news is more widespread in Italy?

Topic	**Fake news spreading**
Illegal immigration	11,8%
Sanitary sistem	11,6%
Discrimination	10,8%
Climate change	10,1%
National debt	8,0%
Violence	7,8%
Cybersecurity	7,5%
Organized crime	7,4%
Poverty of Italian families	7,0%
Privacy	6,9%
Narcotic substances	6,0%
Poor education	5,2%
Other issues	0,3%

Figure 5.7 shows the percentages of respondents who claim to have shared fake news at least once. The 40.4% of respondents believe they have shared at least once information that later turned out to be false. This value is similar between men and women, while it varies by age. Specifically, respondents in the 18-24 age group declare that they have shared fake news at least once in 48.9% of cases, or more than 8 percentage points compared to the sample average. Respondents in the 55+ age group declare that they have shared fake news at least once in only 26% of cases, almost 15 percentage points less than the sample average.

There are also differences between respondents of different political orientations. In particular, the respondents who declared themselves closest to the left-wing political area report having shared fake news at least once in 34.7% of cases, or about 6 percentage points less than the average of respondents. Conversely, the respondents who declared themselves more connected to the right-wing political area report having shared fake news at least once in 44.4% of cases, or about 4 percentage points more than the average of respondents.

Territorial differences are also observed: respondents from Central Italy declare that they have come across fake news at least once in 32.3% of cases, i.e. 10 percentage points less than the average of respondents. Finally, differences emerge between respondents with different educational degree. Particularly, people with a high and low level of education are once again more similar in their perceptions, compared to people with a medium level of education, who declare that they have come across fake news in 37% of cases, i.e. 3 points percentages lower than the average of respondents.

Fig. 5.10. Have you ever shared information with others that later turned out to be false/wrong?

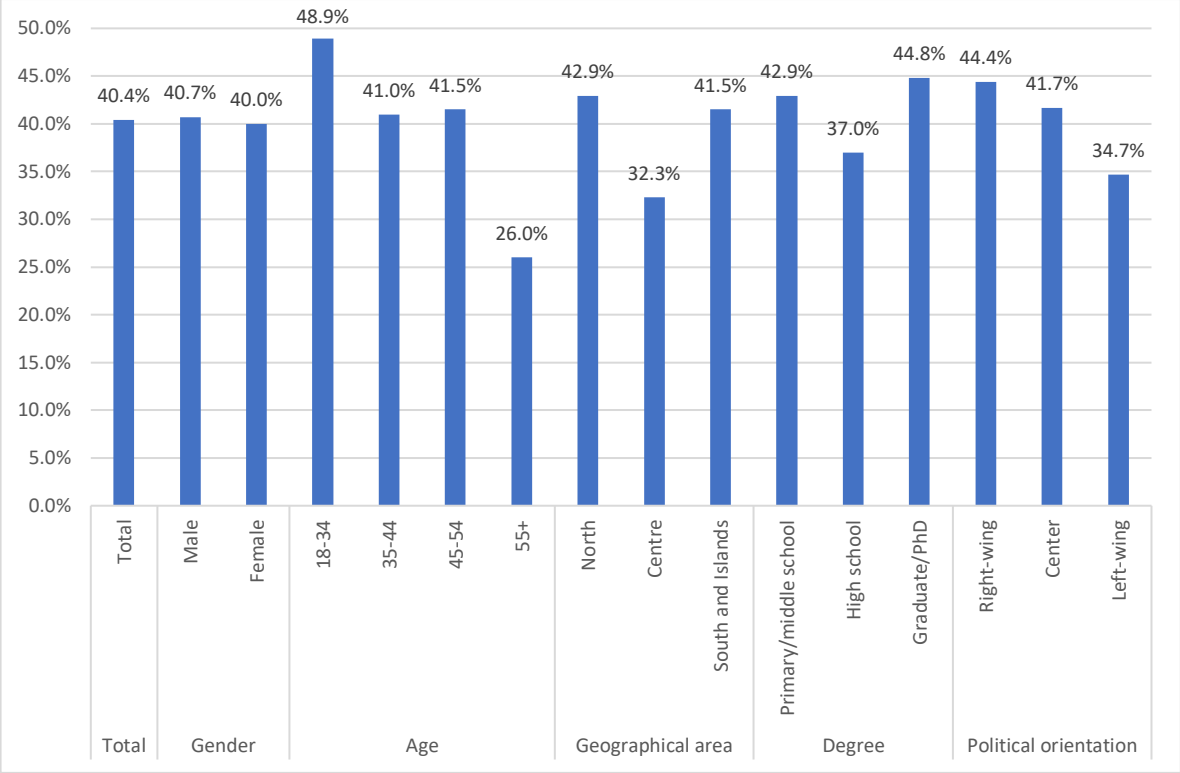
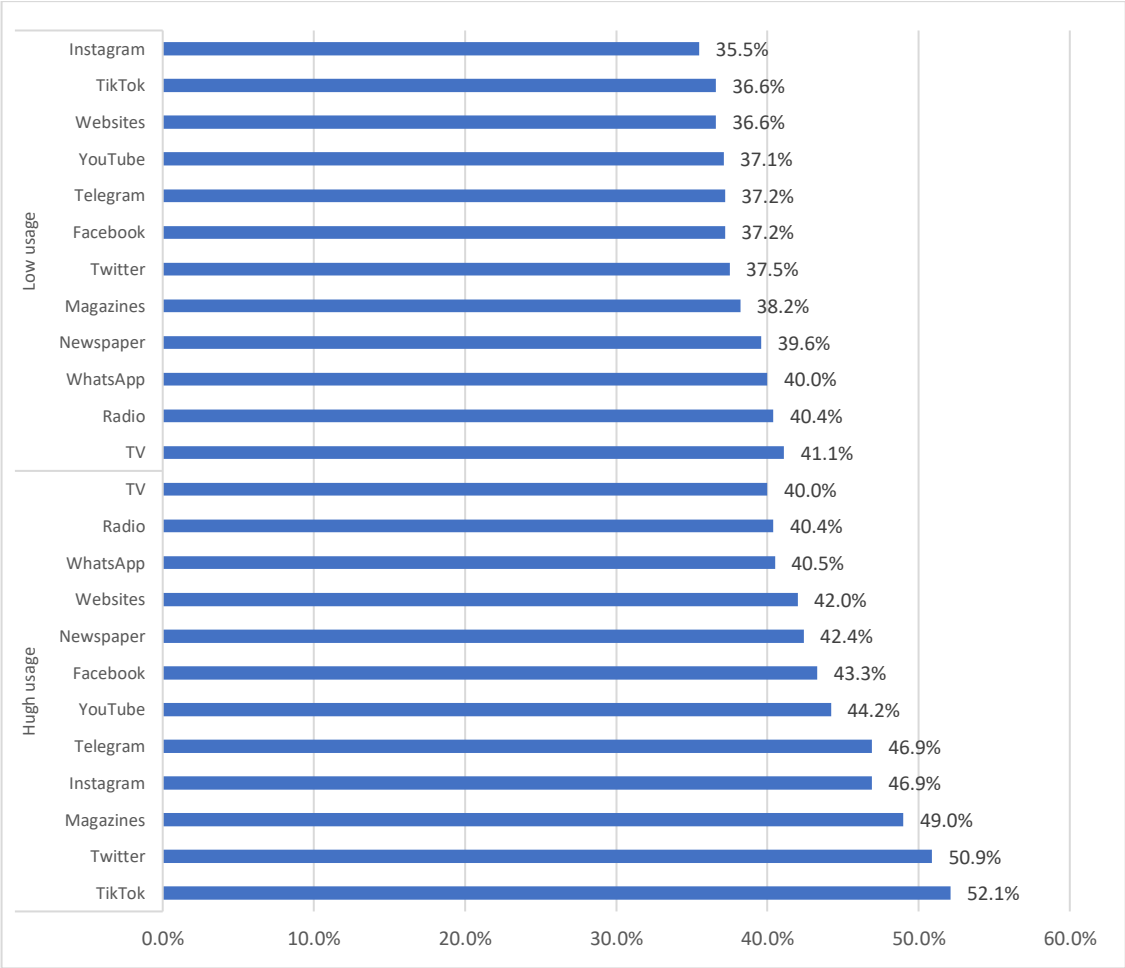


Figure 5.11 shows the percentages of respondents who claim to have shared fake news at least once and the communication channels and frequency of use of the channels. From the figure it can be seen that people who use social media channels assiduously show higher percentages of sharing fake news than those who use these channels less. The highest percentages of fake news sharing are for the assiduous users of TikTok (52.1%), Twitter (50.9%).

Fig. 5.11. Have you ever shared information with others that later turned out to be false/wrong?



5.3 The capability to recognize fake news

From this study it clearly emerges that in the current scenario, and especially in reference to digital channels, the ability to recognize fake news is increasingly necessary to take advantage of correct information and to distinguish real content from false ones. In this vein, Figure 5.12 shows the distribution of the level of perceived ability to recognize fake news, technically the level of self-efficacy. 44% of respondents perceive that they have a good/excellent ability to recognize fake news. 41% of respondents declare that they have a good ability to recognize fake news, while 13.3% declare that they have sufficient ability. Only 14.5% of respondents think they have an insufficient ability to recognize fake news.

Fig. 5.12. How do you rate your ability to recognize fake news? (Insufficient – Excellent)

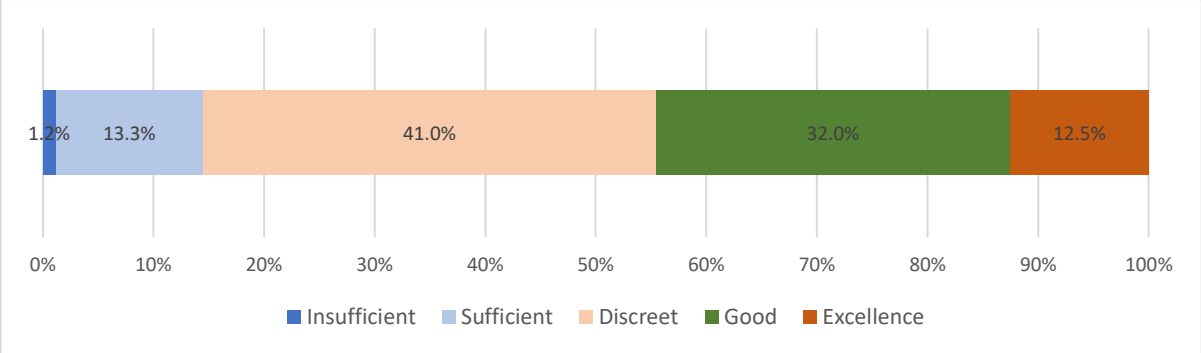


Figure 5.13 shows the distribution of the level of perceived ability to recognize fake news in consideration of the demographic characteristics of the respondents. Regarding the gender, the figure shows that women perceive their ability to recognize fake news as good and excellent to a greater extent than men. As regards the differences between the different age groups, figure 5.10 shows how as age decreases, the perception of being able to recognize fake news also decreases. In fact, while 63% of respondents in the 55+ age group perceive a good or excellent ability to recognize fake news, only 46.8% of respondents in the 18-34 age group have this perception of their abilities. Significant differences are also observed between respondents with different levels of education. In particular, people with a low level of education (primary/middle school) perceive that they have an excellent/good ability to intercept fake news in 71.4% of cases, against only 48% for respondents with a degree/ PhD. Therefore, people who are usually listed among the most at risk in the statistics seem to be the ones who feel most capable of intercepting fake news.

Fig. 5.14. How do you rate your ability to recognize fake news? (Insufficient – Excellent)

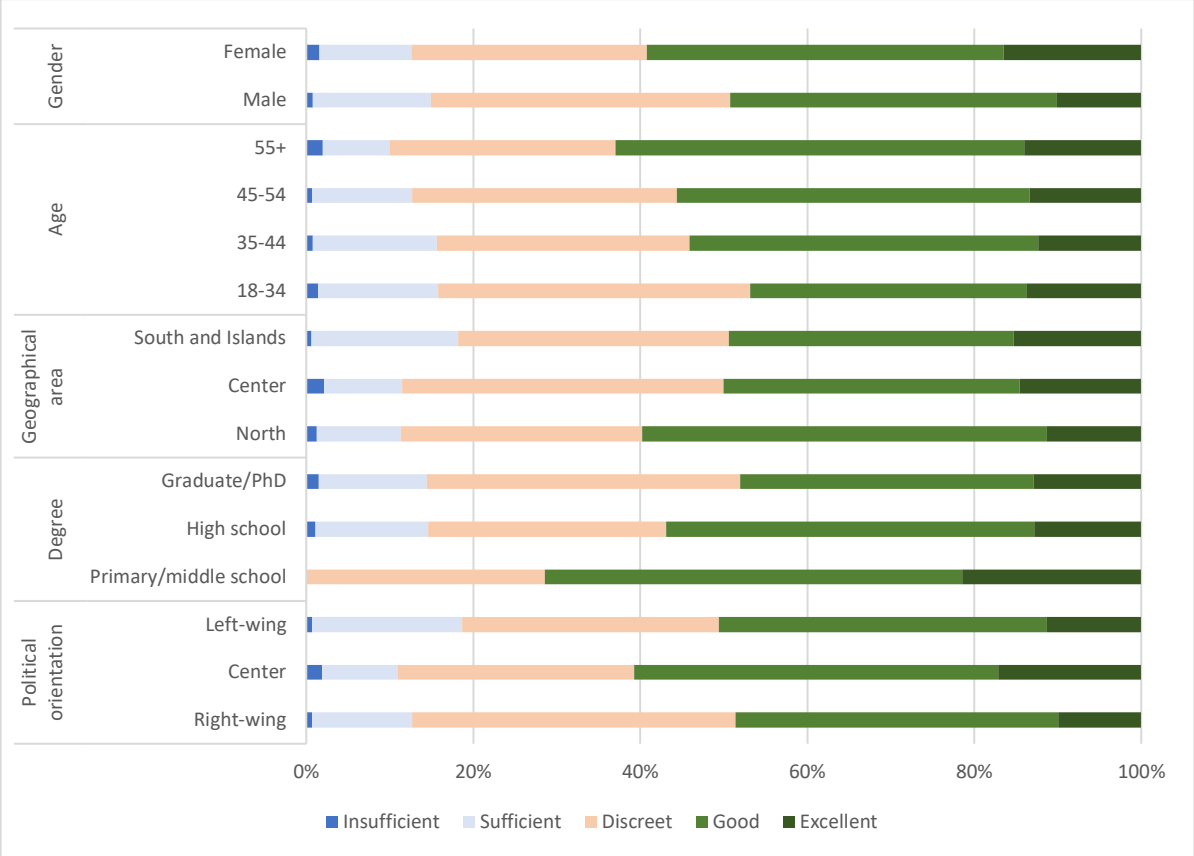


Figure 5.15 shows the distribution of the level of perceived ability to recognize fake news based on the communication channels used and the frequency of use. Figure 5.11 shows how, among the respondents who use communication channels to a lesser extent, the respondents who use information websites, for example blogs and online newspapers, register the highest percentages of perceived ability to recognize fake news. This is followed by instant messaging services, such as WhatApp and Telegram, and social networks, such as Instagram and Twitter. Conversely, respondents who frequently use Television and Radio show high levels of perceived ability to recognize fake news.

Fig. 5.15. How do you rate your ability to recognize fake news? (Insufficient – Excellent)

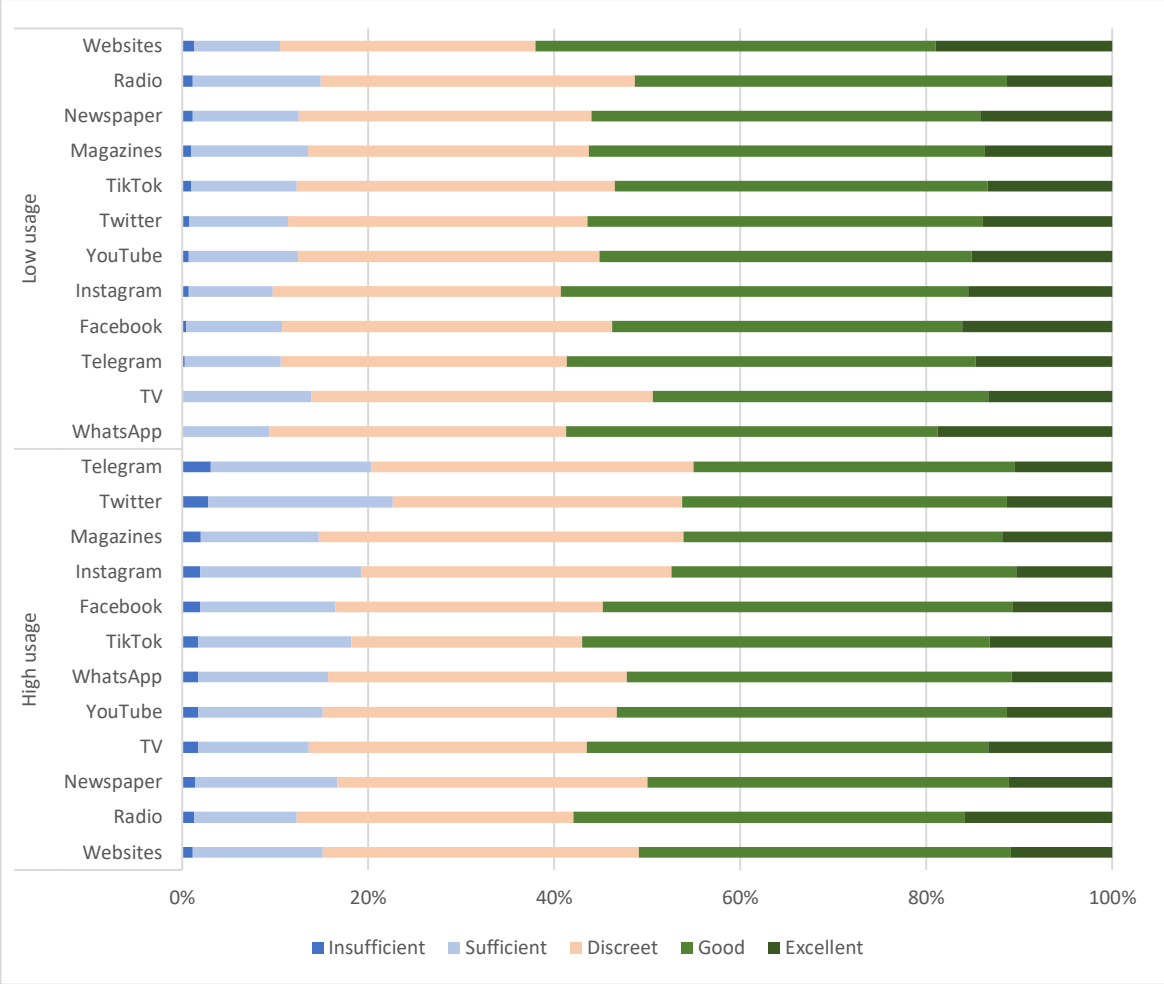


Table 5.4 shows the levels of correlation between self-efficacy and the frequency of sharing fake news. The table shows a significant positive correlation between self-efficacy and the frequency of sharing fake news (0.124**). This means that as self-efficacy grows, i.e. the extent to which a person feels capable of recognizing fake news, the frequency of sharing also increases. Thus, this perceived security in one's ability to intercept fake news, instead of helping people expose fake news, causes them to share it to a greater extent.

Tab. 5.4. Correlation between self-efficacy and sharing of fake news

Item	Fake news self-efficacy	Fake news sharing
Fake news self-efficacy	1	**,124****
Fake news sharing	,124**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

5.3.1 The verification on supplementary sources

The awareness of the spread of fake news pushes people to verify information through supplementary sources. Figure 5.16, in particular, shows that less than 10% of respondents say they rarely or never verify the information received; the majority of respondents (49.3%) stated that they always or almost always check the information received; while the remaining 41.4% claim to verify the information only a few times.

Fig. 5.16. How often do you search websites or other media sources to verify information?

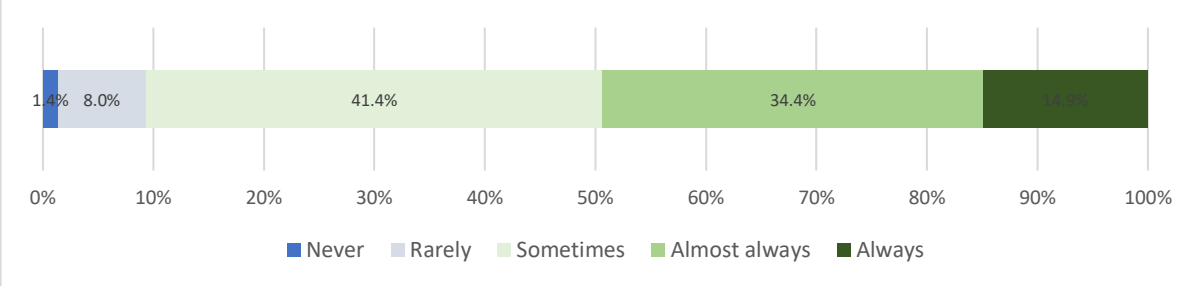
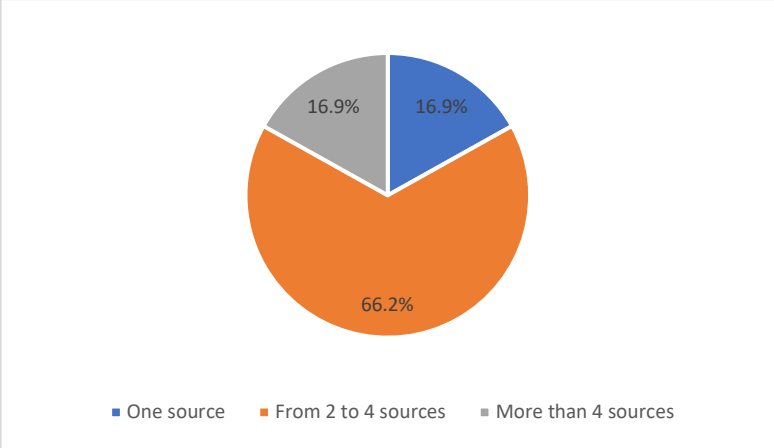


Figure 5.17 shows, in the case of information check, the number of supplementary sources used. The graph shows that in the majority of cases, when respondents decide to verify the information received, the verification takes place through numerous sources, between 2 and 4 sources in 66.2% of cases. In 16.9% of cases, even more than 4 sources are used, while 16.9% declare that they use only one supplementary source.

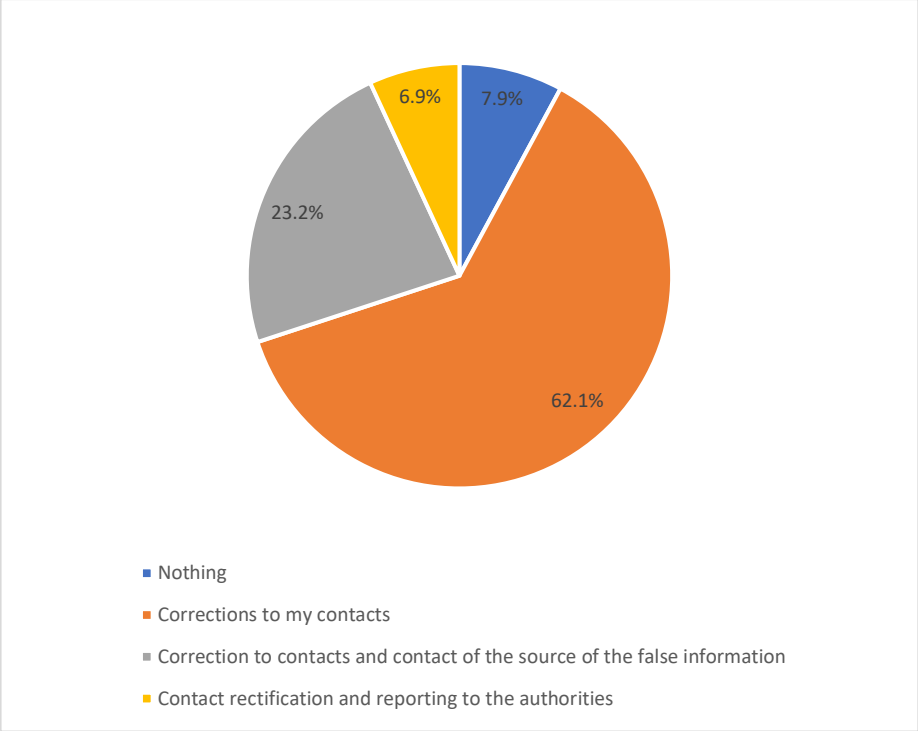
Fig. 5.17. Number of supplementary sources for verifying information.



An important element for understanding the spread of fake news concerns the study of the corrective actions carried out by people following the sharing of fake news.

Figure 5.18 shows that in the case of sharing fake news, 7.9% of respondents do not declare it and do not take any corrective action. 62.1% of respondents limited themselves to making a correction to their direct contacts. 23.2% of respondents correct their contacts and contact the source of the false information to warn of the error, if possible. And only 6.3% of respondents denounce the source of information that spread the fake news.

Fig. 5.18. Corrective actions following the sharing of fake news.

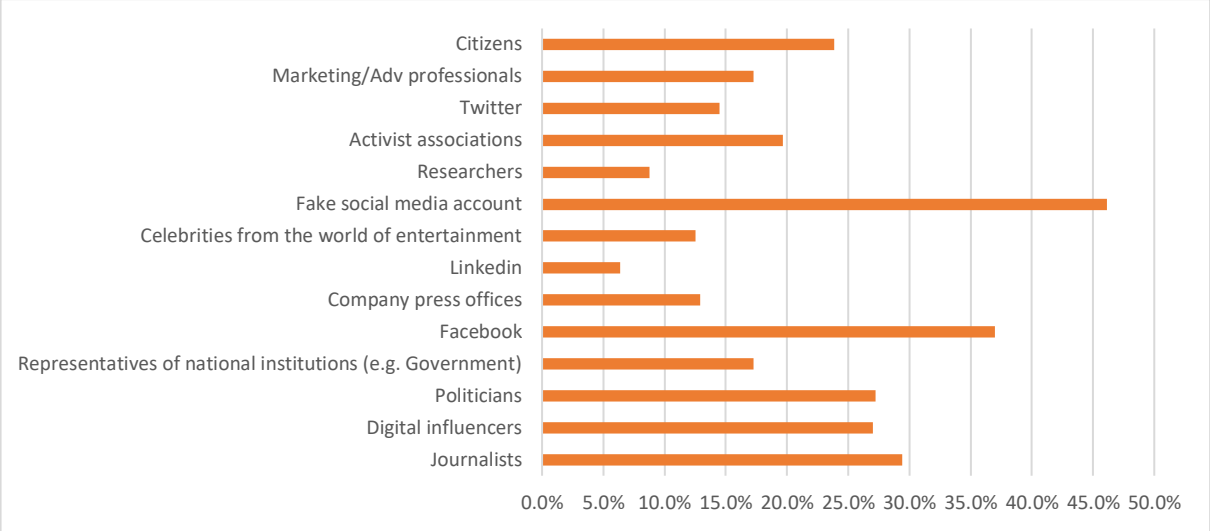


5.3.2 Responsibilities of the fake news dissemination

The second objective of this study is to analyze the role of information in the dissemination and management of fake news, identifying actors, sources and responsibilities. Furthermore, in this paragraph we will analyze the perception of citizens on the role of social media considering in particular the generational variables.

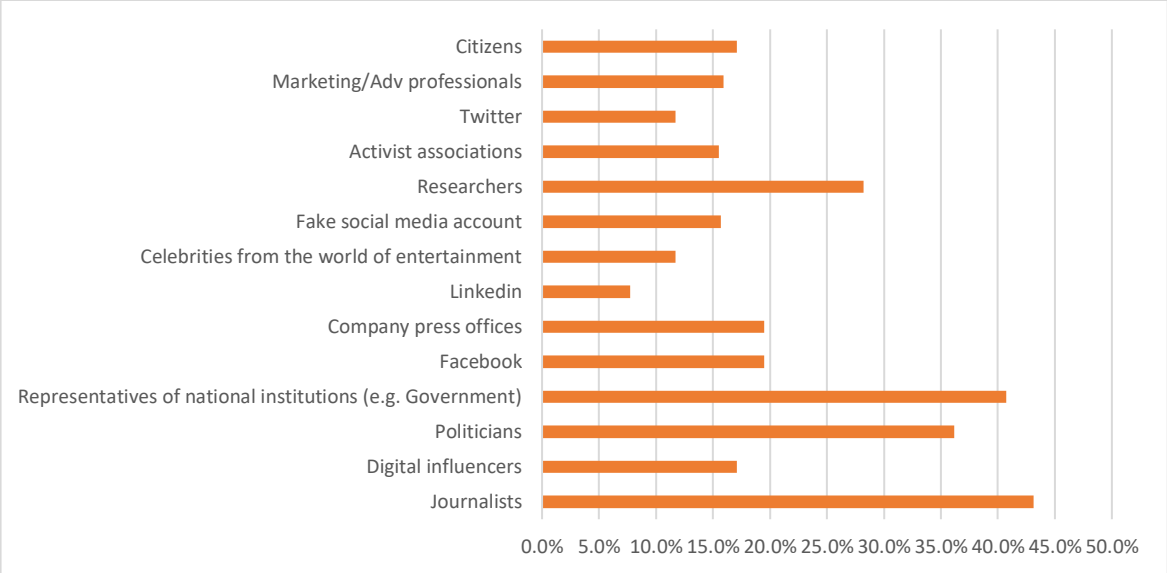
Defining the boundaries of responsibility is crucial for attributing resources and legitimacy to operate in a given field of action. The research maps the actors who are perceived as responsible and influential in the institutional management of fake news. Figure 5.19 reveals that journalists (29.4%) are believed to be the main actors who should act on the issue of disinformation and are therefore attributed the greatest responsibility, followed by politicians (27.2%) and digital influencers (27%).

Fig. 5.19. What are the sources most responsible for spreading fake news in Italy?



Moreover, figure 5.20 identifies the actors who should take the greatest responsibility in fighting fake news in Italy.

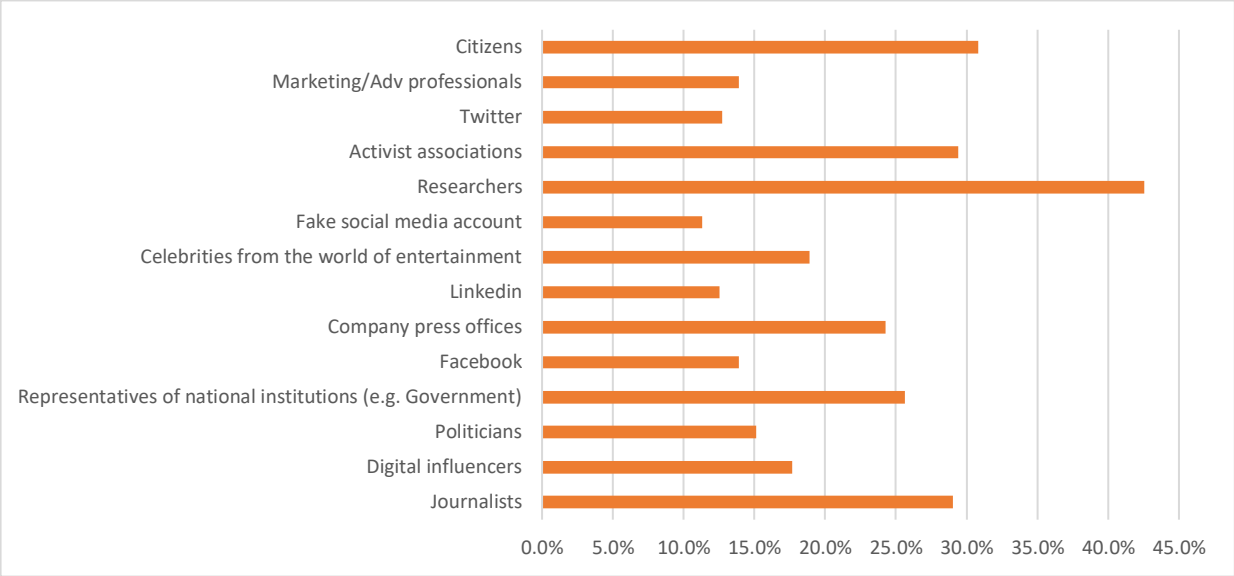
Fig. 5.20. In your opinion, which of the following actors should take the greatest responsibility in fighting fake news in Italy?



Indeed, in the current scenario, fake news is spreading quickly, and many actors are actively or passively working to deny, oppose and correct fake news. Figure 5.21 identifies who in the Italian perception is doing the best job in countering fake news. The primacy of scientists and

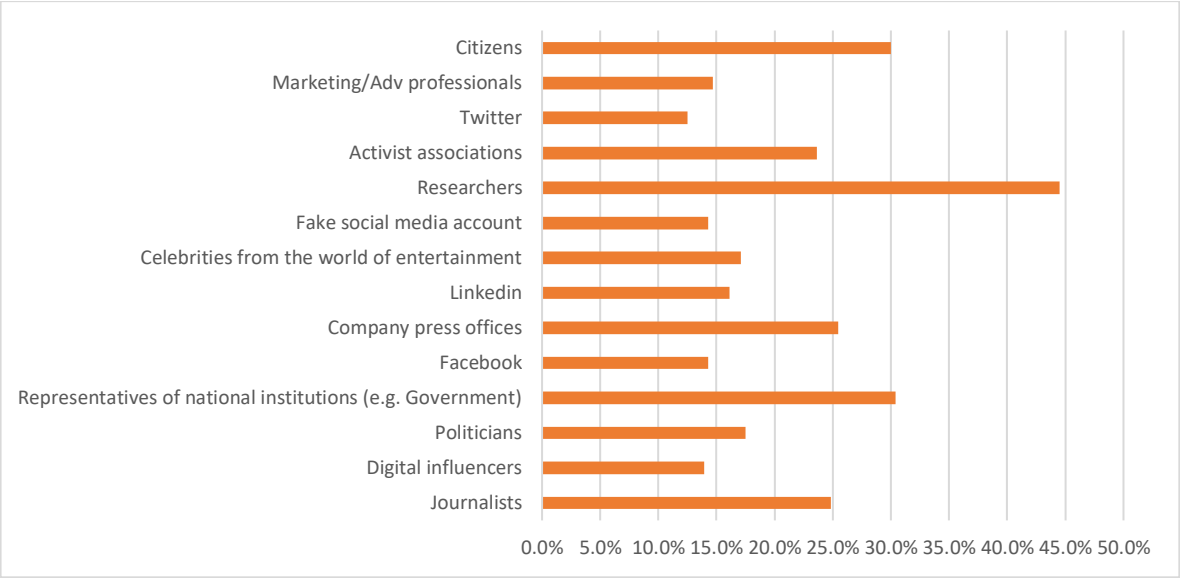
researchers is widely recognized by the survey sample (42.5%). Also interesting is the perception attributed to the work carried out by citizens (30.8%), who are in second place, and by activist associations (29.4%) who are positioned almost on the same merit as journalists (29%).

Fig. 5.21. In your opinion, which of the following actors are doing the best job of fighting fake news in Italy?



As a matter of fact, Figure 5.22 highlights actors and sources considered less responsible for spreading fake news. The data confirm a positive attitude towards scientists and researchers (44.5%), demarcating a trust in the social role of science and scientists as a counterweight to the problem of fake news. Followed by representatives of national institutions such as the government (30.4%) and ordinary citizens (30%). The attribution of responsibility for the dissemination of false news varies greatly between political figures and institutions, whose trust is much higher and the information quality is perceived positively. Digital influencers struggle to position themselves as authoritative actors and are not given the same role as peers as citizens.

Fig. 5.22. Which sources are least responsible for spreading fake news in Italy?



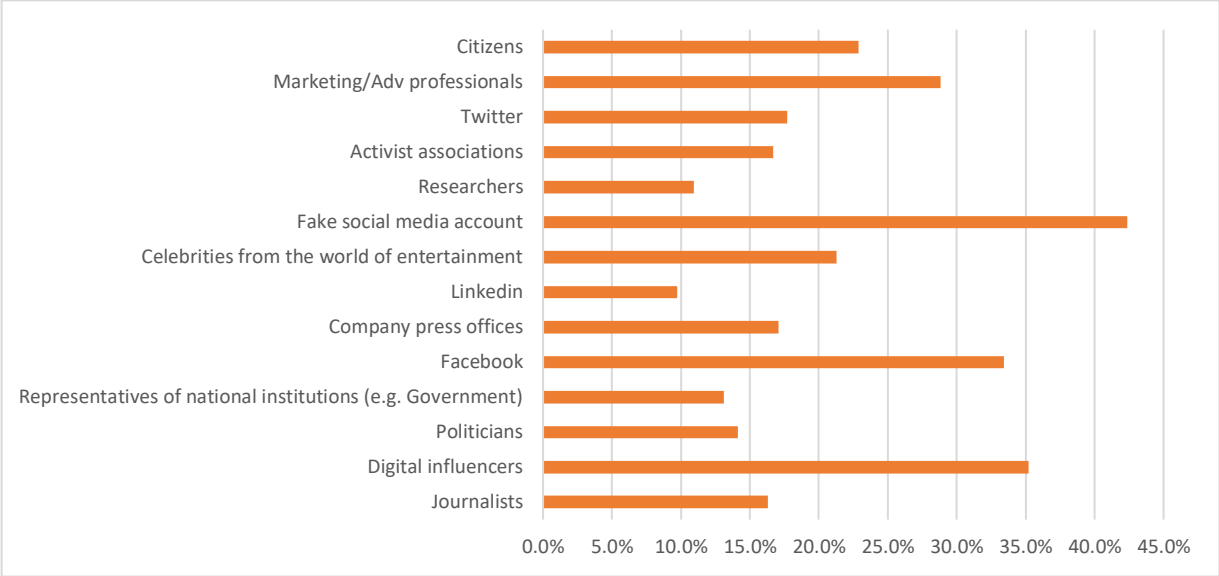
5.4 Fake news and business

In the case of the relationship between business and fake news, the configuration of responsibilities and roles changes. Likewise, also changing both the digital platforms held responsible and the actors who should counter the circulation of fake news on brands, products and services.

5.4.1. Fake news circulating about brands, products and services

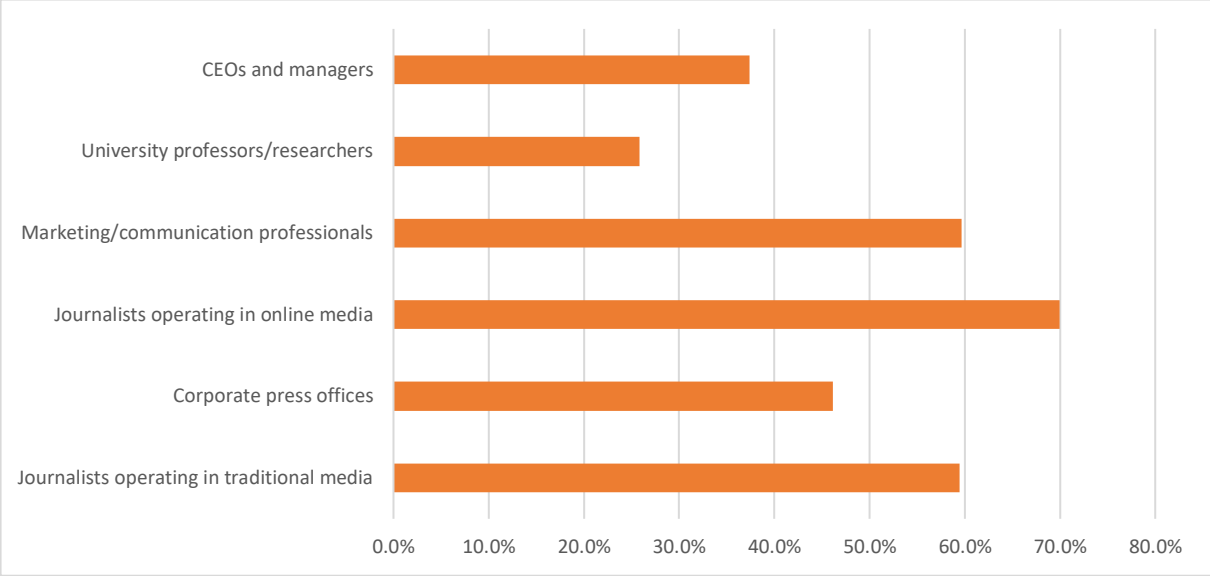
Figure 5.23 clarifies that the diffusion of fake news about brands, products and services is still attributed to fake social media as first responsible (42.3%), but also introduces two other players: digital influencers (35.2%) and marketing and adv professionals (28.8%). The characterization of these two categories as responsible agents in the dissemination of fake news when it comes to brands focuses on the perceived trust in the triangular relationship between marketers, influencers and final consumers.

Fig. 5.23 If you think of the fake news circulating about brands, products and services, who do you think are mainly responsible for their diffusion?



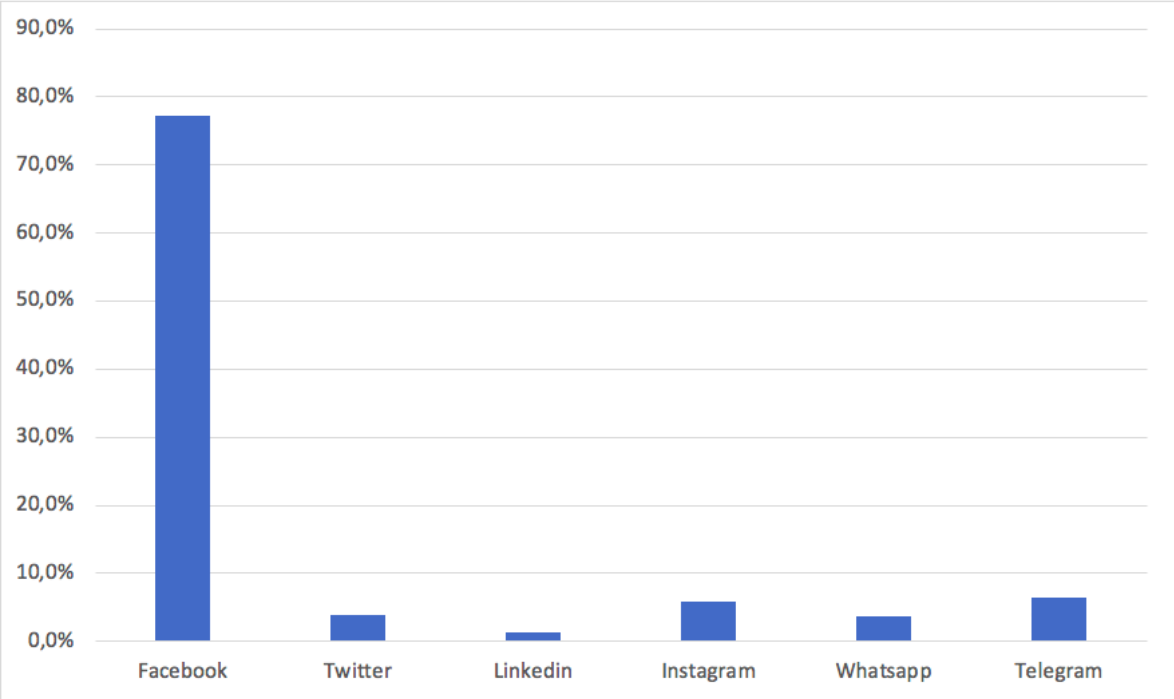
More specifically, the focus of Figure 5.24 is on the role of communication professionals in spreading corporate fake news. Online media journalists are held to be primarily responsible for spreading fake news (70%), followed by marketing and adv professionals (59.6%) and traditional media journalists (59.4%).

Fig. 5.24. Among the professionals working in the field of communication, which do you consider more responsible for the dissemination of information than incorrect or distorted news?



More in detail, Figure 5.25 shows the role of social media, identifying which platforms are significantly associated with the spread of fake news. In this scenario, Facebook is undisputedly the platform where the diffusion of fake news is perceived as more widespread (77.3%). Furthermore, the problem of spreading fake news is attributed more to Telegram among messaging platforms (6.4%), than to Whatsapp (3.6%). The perception of platforms marks both social and structural questions about how these actors should intervene to stem the problem.

Fig. 5.25. Among the social network platforms, which do you think is most responsible for the spread of fake news?



5.4.2. Response strategies of fake news

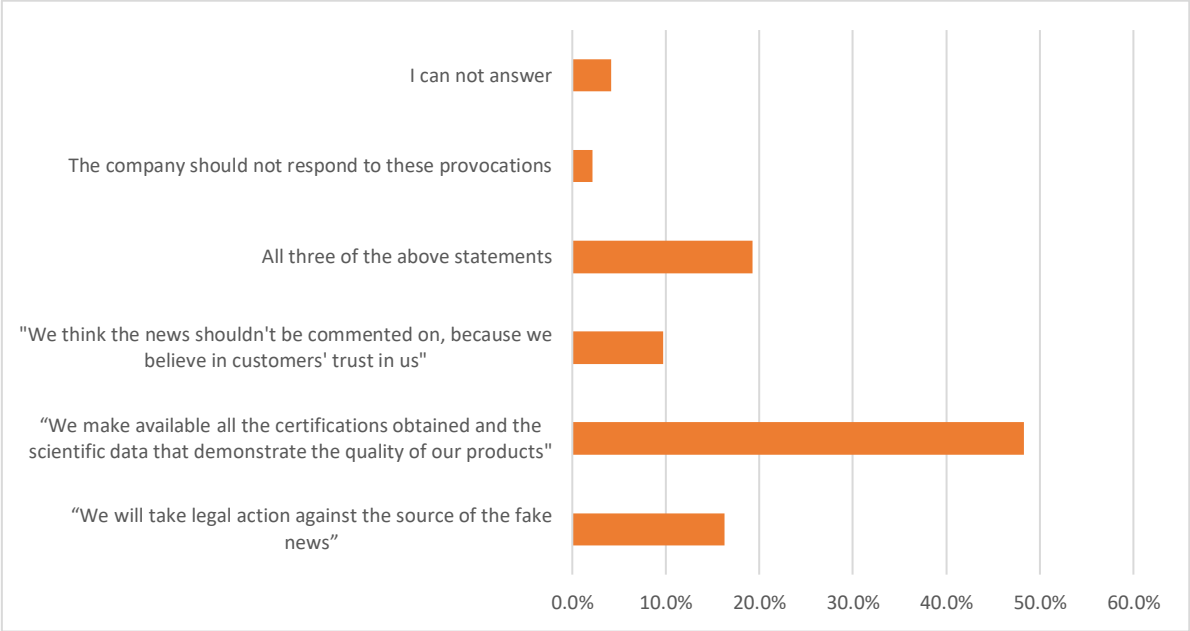
The ultimate objective of this research is to identify the strategies of response to fake news by institutions and companies that are considered more appropriate and effective by Italian citizens. In the current scenario, companies have understood the importance of using digital channels to create and maintain relationships with their target audiences, transforming them into economic value, business potential and social capital. In the virtual space, however, the paradigms of the company-individual relationship have profoundly changed: the environment is disintermediated, the relationship becomes direct, the production and dissemination of information is democratic. In fact, users can create and disseminate content, altering perceptions or building new ones. Digital communication thus has a strong impact on the reputation of companies, and, consequently, unverified content such as fake news takes on a potentially disastrous risk.

An example of reputational damage caused by fake news is the collapse of share values and the distortions on speculative sales that occurred in 2016 following the dissemination of false

news on the irregularity of the accounts of the French group Vinci, which cost the company 7 millions of dollars of market capitalization in a few hours.

As emerged by Figure 5.26, among the various response strategies to fake news, according to the respondents involved in this research, the best is to make materials and evidence available to demonstrate the falsehood of the news (48.3%), followed by a legal action (16.3%) and, finally, by a silence that lays the foundations for the relationship of trust established over the years between customer and company (9.7%).

Fig. 5.26. Please think about a company in the beverage sector that you know. A fake news is spread that the drinks produced by this brand contain toxic substances to our health. The company denies the news and claims it is fake news. What first statement do you think the affected company should communicate in order not to lose trust?



5.5 Highlights and remarks

The phenomenon of fake news is one of the most pressing challenges today for both organizations and society in general. The spreading of untraceable fake news, not recognized as such by the actors involved and even not stigmatized, but whose seriousness is minimized

by citizens, undermines the foundations of a the society, used to reasoning about community problems with the spirit and commitment to fully understand reality in all its forms.

Tracing the causes and consequences of the phenomenon is a complex activity which requires the interaction of many factors and the involvement of different actors. Recognizing fake news and publicly condemning their creators not only requires technological efforts, but raises issues to be paid attention to, such as the freedom of expression that would risk being limited if censorship exchanged a free opinion, perhaps outside the dominant thought, like fake news. Hence, censorship, control, barriers are tools with strong limitations which open up worrying and risky scenarios (Helm & Nasu, 2021). The culture of truth and authenticity should be the founding basis of the society of hyper-communication like the current one, and to push individuals to desire to be authentic in their interactions, whether interpersonal or direct, is the task of educational and training agencies.

Specifically, confirming previous studies (e.g. Spohr, 2017), this research highlights that the sources perceived as major spreaders of fake news are politicians, social networks - especially Facebook - and journalists. It is worrying to see how the perception of the category of journalists, especially those of the online media, is very low, also because it is the professional category from which greater commitment is expected to fight fake news. Among the actors considered most responsible in the circulation of fake news, there are also digital influencers and marketing professionals (Wisker, 2021).

Regarding the relationship between fake news and companies, it is a widespread and prevailing opinion that the key drivers of the response strategies are openness and transparency. In this regard, the clear answer from the survey respondents is that the best strategy for companies attacked by fake news is to provide information with maximum transparency and openness.

Conclusion

In recent years, the phenomenon of fake news has attracted a growing interest in the academic debate because of their capability to easily spread among digital channels, such as social media platforms, and reach and deceive an increasingly large target of digital users. In particular, scholars have traced the spread of fake news to two main causes: on the one hand, because of their structure, social media allow anyone to publish content without preliminary checks on the validity of the news (Allcott & Gentzkow, 2017); on the other hand, social media amplify the phenomenon of homophilia, i.e. the tendency to meet and interact with people similar to us all over the world and entering the eco chambers, where we read opinions only similar to ours and that correspond to our vision of the world, and in this way fake news continues to spread (Colleoni et al., 2014; Grinberg et al., 2019; Quattrociocchi & Vicini, 2016).

Moreover, with the explosion of social media usage that occurred in the period of diffusion of the Covid-19, when digital channels represented for several weeks the only means of communication with the outside world (Statista, 2021), even the dark side of the web has emerged forcefully, i.e. the fake news' spreading. In this scenario, as demonstrated by previous studies, fake news threatens the credibility of organizations, their products and services (Obada, 2019), the trust relationship between organization and consumer (Di Domenico et al., 2021), as well as the organizations internal community (Lee et al., 2020). Thus, organizations are subject to the risk of losing the control of their corporate communication strategies due to phenomena such as the spread of fake news (Jahng, 2021; Sellnow et al., 2019).

Because of these premises, this thesis aimed (1) to investigate how fake news, during its life cycle, attacks the corporate reputation, (2) to identify the key actors involved in the stemming process of fake news and (3) the most effective response strategies of organizations threatened by this phenomenon.

As a first step of this research, a systematic literature review on the fake news topic was conducted. This literature review adopted an interdisciplinary perspective by considering different research areas, i.e. Information Technology, Media Studies, Political Science, Psychology and Management studies. After reviewing the main definitions of fake news

widespread in academic literature (e.g., Lazer et al., 2018) and identified and categorized the dimensions of fake news, i.e. content, form and intentions of the source, this research focused on the Management area and specifically on the studies of Corporate Communication and Marketing Management which investigated the phenomenon. Particularly, from the systematic literature review it emerged that the motivations driving the creation of fake news are economic and/or ideological ones (Allcott & Gentzkow, 2017). On the one hand, economic motivations push organizations to spread fake news with the aim of increasing traffic on a specific website by generating clicks; on the other hand, political organizations spread fake news for propaganda. In this context, social media platforms that favor the formation of the 'echo chamber' do not help users to compare different sources to verify the news – social media repeatedly propose contents which the user already expects to read and which confirm his pre-existing beliefs (Colleoni et al., 2014; Rhodes, 2022). As a matter of fact, some psychological studies (Sindermann et al., 2020) have shown that, especially in the political sphere, fake news is consistent with pre-existing users attitudes. Generally, these studies on fake news have shown that tech-savvy users (i.e., younger) are more likely to recognize fake news and value digital information sources. They are also confident in detecting this content. In this regard, Pennycook and Rand (2018) showed that not all users are equally predisposed to being deceived by fake news, but all individuals are prosumers and co-create branded images by creating content with unverified information. In this vein, recent studies have highlighted the need for more research on fake news in the area of Marketing Communications (Di Domenico & Visentin, 2020), in order to analyze the extent of the phenomenon and its impact on organizations (Visentin et al., 2019).

Hence, through a qualitative content analysis conducted on 454 headlines of fake news collected on Pointer.org database during the Covid-19 pandemic, this research identifies two types of borrowed credibility on which fake news leverages and two thematic clusters that characterize them. By crossing these dimensions, four different ideal types of fake news attack strategies emerged:

(1) *bottom-up attack on what company is:* fake news which attacks the corporate character reputation by leveraging corporate values;

(2) *certified attack on what company is*: fake news that attacks the character corporate reputation by using the borrowed documental or authority credibility, which affect the values of companies or their corporate identity;
(3) *bottom up attack on company behavior*: fake news that attacks the capability reputation by using the borrowed peer credibility to question certain company procedures and behaviors;
(4) *certified attack on company behavior*: fake news that attacks the capability reputation by using the documental or authority credibility.

To understand more these attacking strategies of fake news in relation of its evolution over the time, four longitudinal case studies were analyzed. The findings highlight the weakness of the role of fact checkers, which are unable to access the filter bubbles in which fake news rapidly spreads. According to the findings of the conducted longitudinal case studies, fact checkers and fake news branch out on two parallel channels, without crossing each other, and reaching different targets, by representing an ethical challenge for digital platforms such as social media. Furthermore, the capability of fake news to change their form quickly complicates the fact checkers operations and threatens the digital communication strategies of organizations. Specifically, this analysis reveals that fake news born in a certain format (e.g., as an image or video) and transform over the time (e.g., they become textual content by penetrating user conversations, etc.).

Finally, to investigate the perception of citizens about the fake news circulation and how salient this phenomenon is considered, in the Chapter 5 the results of a survey are reported. Particularly, the findings of the survey highlight that the sources perceived as major spreaders of fake news are politicians, social networks – especially Facebook – and journalists. It is worrying to see how the perception of the category of journalists, especially those of the online media, is very low, also because it is the professional category from which greater commitment is expected to fight fake news. Among the actors considered most responsible in the spreading of fake news, there are also digital influencers and communication/marketing professionals.

Regarding the relationship between fake news and business, it is a widespread and prevailing opinion between Italians that openness and transparency should be the key values of the response strategies. As a matter of fact, the clear answer from the survey respondents is that

the best response strategy for the organization attacked by fake news is to be available in providing timely information.

Theoretical contribution

This PhD thesis contributes to the academic debate in corporate communication and marketing management on the diffusion of fake news affecting organizations, by identifying different strategies of fake news attacks on corporate reputation. Indeed, although the fake news phenomenon was deepen by scholars from different perspectives and also in marketing literature (e.g., Di Domenico et al., 2021), this is the first study which focuses on the fake news' attack strategies.

Indeed, through the multiple case study analysis, this research defines the paths of fake news on the Internet and the different phases in which these false and misleading contents affect organizations. The results of the study reveal that the work of fact checkers currently does not seem to counter the spread of fake news, which continues to change its form and target over time; while the contents of fact checkers spread to other digital networks and do not access the echo chambers where fake news proliferate. Finally, through the survey on the perception of Italian citizens, i.e. consumers, the findings of this thesis show that companies should respond promptly and transparently when they are attacked by fake news, in addition to adopting social media listening processes and fake content mitigation approaches.

Managerial implications

The results of this research also present several managerial implications. In particular, this study analyzed the fake news that attacked organizations which produced vaccines during the Covid-19 pandemic. Findings of the analysis reveal the ease with which the fake news attacks the corporate reputation of organizations by resorting, on the one hand to the authoritative credibility of scientists, researchers and institutions, on the other hand by focusing on the credibility of citizens who would have had previous negative experiences due to vaccinations against Covid-19.

As also demonstrated in chapter 5 of this thesis, marketing and corporate communication professionals therefore face a complex challenge, that is, to fight fake news by leveraging transparency, the openness of information to be provided to web users in a timely manner. In fact, according to this study (see chapter 4), fake news continuously evolves on the web, changing form and target. For this reason, organizations' response strategies, rather than chasing fake news and unmasking them individually, should focus on an organizations' openness to provide all the information users may need to reach the truth.

Research limitations and future research

The overall aim of this thesis was to investigate how fake news fits into the corporate reputation formation process, with particular reference to the fake news that attacked vaccine companies during the Covid-19 pandemic. However, this study presents some limitations.

First, as the qualitative content analysis sample is composed of 454 fake news headlines spread on the Net, this research did not consider the diversification of the digital platform in which the fake news is shared, e.g. social media, newspaper, etc. Second, this study did not consider the impacts that these fake news has had on companies, for example by comparing the previous reputation and the current reputation. Third, this research did not analyze the perspective of the companies to counter the spread of fake news and limit the damage related to corporate reputation, for example interviewing key informants operating in organization attacked by fake news. Future studies could address these three research directions.

Finally, future research could focus on the topic of deep fakes, which represent a growing issue for both organizations and social media users. For example, artificial intelligence systems allow the creation of artificially constructed videos which closely resemble real videos and, therefore, do not allow the user to distinguish real content from artificial content, reducing the users' trust in corporate content published on social media.

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Appendix 1: The analyzed headlines of fake news

Headlines of fake news analyzed
Confidential Pfizer research document, translated from Japanese to English. “Biodistribution” study of mRNA vaccines. Proves the mRNA moves from the injection site to the blood, then circulates spike proteins throughout the body, attacking the ovaries, liver, neurological tissues, other organs. This is the study that will result in mRNA vaccines being pulled from the market.
An article stating that Moderna vaccines had “catastrophic results”.
AstraZeneca, a Chinese company with 45,000 employees. All those who received the vaccine are dead. Several countries have stopped vaccinating. Mike: Covid is a scam, refuse vaccines and masks. This is a plan for mass depopulation.
A speech by a biomedical researcher stating that 21 percent of patients from the Moderna Covid-19 vaccine trial have experienced “serious adverse events”
The Pfizer COVID-19 vaccine is “99% graphene oxide,” which is “toxic to the human body and causes a number of problems.
Alexander Bourla, Pfizer consultant, refused to get vaccinated with their COVID-19 vaccine. These vaccines contain genetically modified organisms, they cause mutations in both adults and children and these mutations can be passed to future generations. Also, these vaccines are unnecessary for children since they cannot get infected or transmit the virus.
People says that Mike Yeadon – ex-worker of Pfizer – told that vaccine against COVID-19 will kill 0,8% people after first injection and other people will died within 2 or 3 years.
Tal Zaks, a scientist working at Moderna stated that their mRNA vaccine hacks lifes’ operating system thus changing the human DNA. Also, a study done by Sloan Kettering Cancer Center proved that mRNA vaccines cause cancer.
Japan-made AstraZeneca hasn’t been approved by WHO for Emergency Use Listing (EUL), no wonder so many people died after getting jabs of Japanese AstraZeneca. Thailand-made AstraZeneca hasn’t got approved by WHO and EU either.
Norway and Denmark banned the use of the AstraZeneca COVID-19 vaccine because they discovered that it causes mutations to our DNA.
The scandal was revealed by the German police with a search of a glassware facroty, which at the beginning of November 2019 received an order from Pfizer for 1.6 million vaccine bottles.

Video shows a German-speaking man roaming the Batumi Republican Hospital and filming empty corridors and wards. The man concludes that since there are no covid-infected patients there, the pandemic has ended in Georgia and that AstraZeneca vaccine, rejected by Europe, has been brought to Georgia.
The International Court of Justice will consider violations of the Nuremberg Code by Israel and Pfizer.
Ex-boss Pfizer said that world don't need vaccines against COVID-19, because pandemic ended.
Various social media posts revealed that the company Pfizer, which is one of the companies that produced SARS-CoV-2 vaccines, is a subsidiary of GlaxoSmith which built the virology lab in Wuhan.
Researchers: Mortality Rates Shoot in Israel After Pfizer's COVID Vaccination
According to Tal Zaks, the Chief Scientist of Modern, mRNA alters the human genome, something that until now was done only by nature or God. Whether intentional or "unintended", this technology is used to do just that, turning you into GMO creatures, dependent on and owned by the author of the genetic modification. He calls this "information therapy"; although some would rather call it "crazy science." So, the next time someone claims that these "vaccines" do not alter the human genome or DNA, you can refer them to Tal Zaks of Moderna, who claims otherwise.
Boris Johnson confessed that Pfizer's vaccine is not a vaccine, but a virus to kill people
Gollan: "Pfizer sold 10 million to Chile, but delivered 30 thousand vaccines until today".
The scientific director of Moderna said that mRNA vaccines change DNA
"Moderna chief medical officer admits: mRNA alters DNA."
Publications that indicate that "Moderna's medical director admits that the experimental mRNA vaccine modifies DNA"
Tal Zaks, the chief medical officer of US pharma firm Moderna, said messenger RNA vaccines can "alter" human DNA

Moderna’s medical director admits that experimental mRNA vaccine modifies DNA
Moderna’s medical director said the COVID-19 vaccine modifies DNA.
Moderna’s medical director has admitted that the experimental messenger RNA vaccine modifies DNA
Moderna’s chief medical officer acknowledged that the MRNA vaccine alters DNA
Moderna’s medical director said the mRNA vaccine modifies DNA
The doctor in chief of pharmaceutical firm Moderna admitted mRNA vaccine against Covid-19 alters the DNA
Tal Zaks (Moderna’s Chief Medical Officer) talked about hacking the software of life in order to say that through Covid-19 vaccine, Moderna will control the population
Taiwan’s Premier, Su Tseng-chang, received the AstraZeneca shot with a capped needle.
The former president of Pfizer claimed that the concept of asymptomatic transmission of the virus was invented in 2020 due to the COVID-19 pandemic.
Albert Bourla, Pfizer’s CEO, said he would not take the company’s vaccine
Posts claim the AstraZeneca vaccine is being “questioned” by Australian authorities.
They found the fetus in the AstraZeneca coronavirus vaccine in Turkey.
Pfizer’s top executive admitted that they are using their vaccine to shift the COVID-19 pandemic to an epidemic to profit.

The AstraZeneca vaccine contains the potentially dangerous substance polysorbate 80, which, according to research in rats, has caused cancer and infertility in them. Polysorbate 80 is added to the vaccines in order to cross the blood-brain barrier and penetrate the human brain.
A Public Health England report confirms that infections increase during the fortnight after vaccination, showing a 48% rise in infections after the first dose of Pfizer and AstraZeneca vaccines
A Public Health England report confirms that infections increase during the fortnight after vaccination, showing a 48% rise in infections after the first dose of Pfizer and AstraZeneca vaccines
According to Pfizer's ex-employee, 0,8 % of vaccinated with the first dose die in two weeks.
New scientific study: Pfizer vaccine confirmed to cause neurodegenerative diseases!
Based on evidence that were presented in a report that was submitted to the World Health Organisation, the Pfizer/BioNTech mRNA vaccine against SARS-CoV-2 can cause infertility in women. This is caused due to the fact that the virus spike protein is very similar to syncytin-1, a protein involved in the process of placental development. Also the vaccine ingredient mNeonGreen is potentially dangerous,.
Mortality from vaccines Pfizer and Moderna in the US is between 58% and 41% as evidenced by VAERS.
Mortality from vaccines Pfizer and Moderna in the US is between 58% and 41% as evidenced by VAERS.
A new recommendation from EMA: "AstraZeneca" should not be given to people over 60 years.
A report on the Pfizer vaccine from the University of Almería shows that the COVID-19 vaccine contains graphene oxide
According to a VAERS report, a 2-year-old child died after getting the second dose of the Pfizer/BioNTech vaccine for the COVID-19 as part of the clinical trials for use of the vaccine children.
The group that represent the colombian government in the negotiation with Pfizer did not how to speak in english

The headlines in various media outlets claimed that “six people died after receiving the Pfizer vaccine”
The forensic expert who performed the autopsy on the teacher who died in Marbella (Spain) after receiving the Astrazeneca vaccine says he was pressured by the government and received bribes.
A German study proves that the Pfizer/BioNTech vaccine is ineffective and even dangerous because the autopsy of an 86-year-old vaccinated man revealed the presence of Sars-Cov-2 RNA and protein S “spike” in his body.
Isreal found catastrophic effects of Pfizer vaccine.
Japan has asked vaccinated people not to give their blood and China has suspended Pfizer vaccination
Pfizer vaccine has not been approved by the FDA because it has not gone through test periods and, therefore, is being tested directly on humans during the widescale vaccination.
Image of US CDC’s data shows that 653 American died from Pfizer vaccine
Despite the positive results from the clinical trials, the Pfizer/BioNTech vaccine has proven ineffective, since Israel reported tremendous increases in COVID-19 cases and deaths amongst vaccinated citizens.
Pfizer vaccine caused 288 deaths in Israel according to IPC report, which is also evidenced by the fact that the death rate in January-February 2021, at the peak of the vaccination campaign, increased by 22% as compared to the last year.
Johnson & Johnson decided to stop the production of the AstraZeneca vaccine, as 15 million doses of the vaccine went bad due to a technical error at the factory.
Georgia’s Health Minster said she would not be vaccinated with AstraZeneca.
Angela Merkel refused to get the AstraZeneca vaccine.
Pfizer’s head of research said that the COVID-19 vaccine is ‘female sterilisation’

A Pfizer researcher found that the company's Covid-19 vaccine will lead to infertility in women
Michael Yeadon, head of research at Pfizer, stated that the mRNA vaccine against SARS-CoV-2 causes infertility in women.
Head of Pfizer research said that covid vaccine is female sterilization.
The CEO of Pfizer was not fully vaccinated.
Pfizer CEO Albert Bourla could not go visit Israel since he has not been vaccinated and that's all you should know about the vaccines.
French star Jean-Marie Bigard claiming Pfizer's CEO didn't get vaccinated.
Albert Bourla, CEO of pfizer, does not want to give his own vaccine
Albert Bourla, CEO of Pfizer, did not want to give his own vaccine
Pfizer CEO is responsible for creating mad cow disease
Pfizer CEO refuses to take COVID-19 vaccine.
Pfizer CEO Albert Bourla has not received the COVID-19 vaccine.
CEO of Pfizer could not come to Israel because he was not vaccinated from COVID-19.
Pfizer CEO's Israel visit cancelled because he is unvaccinated

Pfizer’s CEO refuses the vaccination and says that it is not recommended for him
Pfizer’s chief executive Albert Bourla refused to take the Covid-19 vaccine manufactured by his company because “my type is not recommended”.
Pfizer’s top management refuses to use its vaccine.
Pfizer CEO said he will not get COVID-19 vaccine produced by the company
Media outlets reports that Mike Yeadon, former vice president of Pfizer, said: “No need for vaccines, the pandemic is over”
European Commission is preparing an investigation against AstraZeneca because of the vaccines’ side effects.
Australian Health Minister Greg Hunt has suffered cellulitis caused by an AstraZeneca Covid-19 jab.
South Korean health authorities destroyed a batch of Oxford/AstraZeneca Covid-19 vaccines after they were exposed to colder temperatures than is recommended.
The FDA has not approved the Pfizer vaccine
California stopped the use of the Moderna vaccine after a series of reported serious side effects.
Texts ton an image of Japanese congressman Kenji Yamada receiving says that Japan threw AstraZeneca away to Taiwan since it causes a blood clot.
The Chief scientist of Pfizer, Mike Yeadon claims that 0.8% of Covid vaccine recipients die within two weeks after their first jab. The average lifespan of them is two years.
According to an official announcement from Pfizer, their mRNA vaccine for COVID-19 provides immunity for only 6-8 months. Therefore, everyone in Greece who has taken both doses of the vaccine already will have to get vaccinated again in the summer.

Nick Janakis, professor of pulmonology at the University of Crete stated that the odds of developing thrombosis from the AstraZeneca vaccine are not small.
Publications that state that a former vice president of the pharmaceutical company Pfizer “assures that the pandemic is over”, and that “there is absolutely no need for vaccines to extinguish the pandemic”
An EU publication claims that an Italian doctor died after receiving the second dose of the Pfizer vaccine
A new UK report has proved a causal link between deaths and the AstraZeneca vaccine.
According to a greek priest the Pfizer/BioNTech mRNA vaccines for SARS-CoV-2 contain cells from aborted fetuses.
The side effects of the Pfizer vaccine, published by the US Centers for Disease Control and Prevention, are listed.
The Health Minister said each dose of the pfizer vaccine cost 100 USD
A new study proves that the immunity acquired by the Moderna vaccine lasts only 3 months.
The World Health Organization announced a reduction in the dosage of the Pfizer/BioNTech mRNA vaccine by 20%.
Pfizer said recipients of its COVID-19 vaccine should not have unprotected sex for 28 days after receiving their second dose
Doctor Fu, who works at Taichung Veterans General Hospital forced and cheated a 70-year-old into getting AstraZeneca vaccine on April 16.
Former scientific advisor to Pfizer Michael Yeadon claims that “the pandemic is fundamentally over in the U.K.,” and, “we now know loads of people had prior immunity” to COVID-19
WHO recognized that the AstraZeneca vaccine causes thrombosis.

AstraZeneca, University of Oxford’s COVID-19 vaccine has failed
Studies showing that the vaccine COVID-19 Pfizer can cause neurodegenerative diseases.
Pfizer has admitted in a document that the COVID-19 vaccine can be transmitted “through the environment” to the unvaccinated.
People who take the Pfizer vaccine can transmit COVID-19 by touch, according to the clinical trial’s report.
Former Pfizer Employee Mike Yeadon Statements About SARS-CoV-2 Variants and COVID-19 Vaccines
Pfizer document says vaccinated transmit ‘disease’ to unvaccinated
It shows no data on Moderan’s American website when you enter the lot numbers on Moderna vaccine vials Taiwan received.
An article states that Moderna found a vaccine for COVID-19, and it will produce a billion doses by December.
A picture of a big blue bruise on the hand after the AstraZeneca vaccination.
Study shows that vaccinated by Pfizer had nanoparticles in their bodies.
An E-commerce page said Pfizer will give out free vaccination vouchers to their loyal Viagra (sildenafil) customers.
Pfizer documents confirm that vaccinated people put unvaccinated people at risk.
Pfizer admitted through an official document that the spike protein of SARS-CoV-2 that is synthesized by the instructions contained in their mRNA vaccine can be transmitted to others. They also admit that there is documentation proving that this protein can cause thrombosis.

FDA states Pfizer/BioNTech is an “unapproved vaccine.”
A publication that claims that the Pfizer vaccine causes sterility in women
A website claiming to belong to Pfizer sells alleged COVID-19 vaccines “to the general public” in Mexico.
A former Pfizer employee said that vaccines are not needed to end the COVID-19 pandemic
Citing the manufacturer Moderna from its official website, the author explains how mRNA vaccines work and states that “our natural biological bodies will change and infiltrate synthetic things, including nanoparticles.”
A man claims that the Pfizer vaccine will cause either Guillain-Barré syndrome or cancer. It will modify your DNA and that Christians do not accept it.
The confidential document shows Moderna already had a COVID-19 vaccine before the pandemic began.
Photo of an alleged package of the Pfizer vaccine. It says “made in China”
A photo shows a truck of Pfizer that had an accident
Photograph showing a suspected Pfizer COVID-19 vaccine that is “made in China”
Photos show vaccine participants for Pfizer Inc.’s COVID-19 vaccine that developed Bell’s palsy.
A photo of three of four clinical trial volunteers who have developed Bell’s palsy after receiving doses of the Pfizer-BioNTech Covid-19 vaccine.
Video of a woman shaking after getting Pfizer’s vaccine

Videos show two women having trouble moving or speaking due to tremors side effects of the Pfizer and Moderna vaccines.
Woman shaking in video has a strong reaction to Pfizer's vaccine
An image showing that the Pfizer vaccine is being manufactured in China and is in the form of a vaporizing cartridge
it shows Pfizer's COVID-19 vaccine (vaporizer cartridge), which is made in China.
A photo set of people with flaccid facial palsy that purports to be photos of Pfizer vaccine recipients
A photograph shows suppossed adverse effects from Pfizer vaccines in the feet of a volunteer
Photo of a Covid-19 vaccination certificate with text that Pfizer vaccine can prolong erections and increase the size of the genitals
The Moderna or Pfizer vaccine is not a vaccine, it is a hoax. These are products of RNA gene therapy, not vaccines. This technique has never been studied in animals. Humans will be the first guinea pigs on earth. This can permanently and irreversibly alter our genes, chromosomes, so that these abnormalities can be passed on to our children.
In Israel, there were "killed" 40 times more elderly by the Pfizer vaccine than the coronavirus
The Pfizer-BioNTech Covid-19 vaccine is "poison" because it contains potassium chloride — a chemical also used to stop the heart during a process of lethal injection.
"The Pfizer vaccine, for the elderly, killed during the 5-week vaccination period about 40 times more people than the disease itself would have killed"
The company name AstraZeneca comes from Latin and means 'kill the stars' or 'that is, kill stars'

Those who have received an injection for COVID – which is falsely called a vaccine because it is not a vaccine but an experimental gene therapy – will be treated as they used to be treated for leprosy. There are data that those who received the injection, whether produced by Pfizer, Moderna, AstraZeneca, etc., become a vector of infection, ie. by infect them they infect those who have not received a vaccine. This process in medicine is called “mitigation” if it is a real vaccine. It is not known how these injections today, which we repeat are NOT VACCINES, affect us who have not received a dose.
Pfizer and Moderna’s COVID-19 vaccines are not classical vaccines, since they were obtained through a combination of gene synthesis and DNA technology. The vaccine will change coding in a human gene. After vaccination, 80% of vaccinated people experienced clinical side effects.
Between 9 December 2020 and 14 March 2021, 594 people died and 404,525 suffered injuries in the UK after receiving Pfizer and AstraZeneca COVID-19 experimental vaccines.
In the UK, more people died from Pfizer’s side effects than from AstraZeneca
Denish football player Christian Eriksen had a sudden heart attack after receiving a jab of Pfizer’s vaccine.
A volunteer on the Pfizer vaccine tests had a severe allergic reaction to it. Her body was covered in wounds and she could not even walk
Pfizer’s vaccine are not safe. Two people in UK died after receiving a dose of it
Several Israeli women reported irregular menstruation and abnormal bleeding after receiving the Pfizer vaccine against KOVID19.
A doctor who was volunteering in clinical tests was killed by the vaccine produced by Oxford/AstraZeneca
The Moderna and Pfizer-BioNTech Covid-19 vaccines have “killed” hundreds of people in the United States
Moderna’s COVID-19 vaccine is dangerous.
AstraZeneca means “weapon that kills.”

There is a greater risk of dying from the AstraZeneca vaccine than from COVID-19
There are DrogaRaia! * Dear customers, it is with great satisfaction that we announce the start of scheduling for Private vaccination against Covid-19. Only 20 vacancies per day! Schedule your time now. Agility and convenience! CoronaVac – R $ 225.00 Pfizer – R $ 295.00 Jensen (Single dose) – R $ 379.50
The citizens were vaccinated with AstraZeneca, Sinopharm, Sputnik V, Pfizer, and soon with Sinovac. There was a lot of speculation about the composition of the vaccines, so some vaccinated citizens decided to do an interesting experiment.
Wuhan Lab is owned by the pharmaceutical company Glaxo, which is also the owner of Pfizer. Both companies are managed by BlackRock, a George Soros-owned company.
The Wuhan biological laboratory belongs to the pharmaceutical company Glaxo, in a chain of relationships in which Pfizer, George Soros, Bill Gates and the WHO also participate, which makes clear the origin of a pandemic that enslaves society.
mRNA vaccines such as Pfizer and Moderna contain genetic factor that can alter your gene and they are highly lethal.
A Danish health official dies at a press conference where Denmark announced it would suspend AstraZeneca Covid-19 vaccinations
One of the ingredients in the COVID-19 vaccine by AstraZeneca is “ChAdOx1-S” which is recombinant DNA, meaning it contains genes from two different species. This ingredient will cause DNA modifications to any person who gets vaccinated.
The AstraZeneca vaccine for COVID-19 contain cells from aborted fetuses.
A dose of CoronaVac costs R$ 58, while a dose of the Oxford/Astrazeneca vaccine costs R$ 3.40
Moderna does not vaccinate people against COVID-19 but insets chips. mRNA technology is biohacking.
“80% of people taking the Moderna vaccine had significant side effects, via Bill Gates.”

Pfizer and Moderna's COVID-19 vaccines are not classical vaccines, since they were obtained through a combination of gene synthesis and DNA technology.
South Korea resold their 117,000 doses AZ vaccine to Taiwan after receiving Pfizer vaccine, indicating that AZ vaccine is inferior.
Photos showing personnel carrying the cases containing the Pfizer/BioNTech mRNA vaccine prove the authorities are mocking greek citizens. These vaccines need to be refrigerated at a -70°C and the trucks that carried them are not capable of sustain these temperatures.
A vaccine of COVID-19 Oxford-AstraZeneca carries "four fragments" of the HIV-1 virus.
AstraZeneca (Covishield) vaccine contains chimpanzee virus and aborted human cells
AstraZeneca violates the Nuremberg Code since it represents a genetically modified organism.
Oxford / AstraZeneca (Covishield) vaccine can modify human DNA
Taiwan's first batch of AstraZeneca vaccine was originally rejected by South Korea. That explains why the vaccine was going to expire when it just arrived in Taiwan.
Switzerland denied registering AstraZeneca COVID-19 vaccine.
Switzerland has completely refuced the AstraZeneca vaccine
Astrazeneca/Oxford COVID-19 vaccine is produced to change DNA.
14-week-old male fetus DNA added to AstraZeneca vaccine
AstraZeneca/Oxford Covid-19 vaccine contains MRC-5 cells originally taken from an aborted human foetus.

AstraZeneca’s COVID-19 vaccine contains MRC-5 cells from an aborted fetus
Pfizer vaccines come with a Microsoft Pluton processor.
Microsoft includes chip into Pfizer’s Covid-19 vaccine
Pfizer signed a deal with Microsoft to integrate a processor chip in a vaccine
Micro-chip from Pfizer and Microsoft will reduce vaccination side effects.
mRNA vaccines such as Pfizer and Moderna contain genetic factor that can alter your gene and they are highly lethal.
Pfizer, Moderna and Astrazeneca are handing out flyers against Covid-19 vaccine
The virology center of Wuhan is related with GSK and Pfizer
A chain that links the Wuhan Virology Laboratory (China) with the pharmaceutical company GlaxoSmithKline; and it also names it as the owner of another competing firm, Pfizer.
The Wuhan Institute of Virology is owned by GlaxoSmithKline, which owns Pfizer.
The Wuhan lab is owned by Glaxo and is related to Pfizer, which distributes the vaccines for COVID
Wuhan Virology Laboratory is owned by pharmaceutical companies, Pfizer and Glaxo
Pfizer-BioNTech’s Covid-19 mRNA vaccine contains lipid nanoparticles that could be concealing “little computers”

GlaxoSmithKline owns the Wuhan Institute of Virology and Pfizer
Wuhan Institute of Virology and Pfizer are owned by the pharmaceutical company Glaxo.
The Wuhan Virology Laboratory has a link with GSK and Pfizer
Viral text says that Wuhan biological laboratory is owned by Glaxo and Pfizer laboratories
Pharmaceutical company GlaxoSmithKline owns Pfizer
Electronic devices “recognize” people who have received the AstraZeneca Covid-19 vaccine.
A photo of Astrazeneca vaccine of march proves that coronavirus was planned
The 90-year-old British grandmother who became the first person in the world to receive the Pfizer-BioNTech Covid-19 vaccine outside of a clinical trial was previously pictured receiving the Covid-19 vaccine in a CNN news report in October 2020, at least two months before the UK vaccination drive started.
Ingredients of AstraZeneca vaccines: – Chimpanzee Adenovirus – Genetically modified kidney cells of an aborted human embryo (usually using a 14-week-old fetus) and therefore stored below -70 ° C – other harmful toxic chemicals, Vaccine not approved by the Food and Drug Administration
India gave Mexico 870,000 AstraZeneca vaccines against COVID-19
“Thermal Transporter” maintains a temperature of -8C for five days, which raises the question of whether in Serbia the Pfizer vaccines came in such packages, when exactly they arrived, where and how they have been stored before being delivered to Macedonia.
Colombia bought 16 million doses of the new coronavirus vaccine from the pharmaceutical company Pfizer

Russian scientist managed to extract a 5g nanochip from the Pfizer/BioNTech vaccine and published the schematics.
Margaret Keenan, the 90 year old woman who was presented as the first to get vaccinated with the Pfizer vaccine for SARS-CoV-2 was an actor since the real Margaret Keenan had already died on September of 2020.
The WHO doesn't have the answer on the safety of AstraZeneca
Ukrainians are getting low-quality vaccine like CoviShield and not getting other kinds like AstraZeneca.
The Colombian government bought the astrazeneca vaccines for 21 usd each dose
For 12-15-year-olds, no vaccination against COVID-19 is better than vaccination. These are the results based on the Pfizer-BioNTech vaccine study.
The best vaccine is not the American Pfizer, but Chinese one, and Georgia should start negotiations with China on the procurement, but the COVAX platform, which Georgia is part of, prohibits to buy the vaccine independently from other manufacturers, outside COVAX.
Donald Trump "owns half of Moderna."
Danish government officials were poisoned to death because they announced a ban on using the AstraZeneca's Covid-19 vaccine
A picture of an AstraZeneca vaccine phial with the date 20th March 2020 proves that the pandemic was planned.
A photo circulating widely on social networks shows a bottle labeled Oxford vaccine (AstraZeneca) in March 2020, and has been used to suggest that the pandemic was planned.
The image of an AstraZeneca vaccine dated March 15, 2020 that supposedly shows that it was all planned
Photo claims that AstraZeneca vaccine contains cells from aborted fetuses, specifically "lung tissue from a 14-week aborted Caucasian male."

Pfizer announces updated COVID-19 vaccine, now includes Microsoft chip to reduce symptoms.
Pfizer's Covid-19 vaccine contains a chip that attaches a magnet to the injected arm.
Pfizer has announced 'an update' to the COVID-19 vaccine 'with the Microsoft chip.'
Pfizer announced that its vaccine update includes a Microsoft chip.
Pfizer announced that there is a microphin inside Covid-19 vaccine
Pfizer has announced an "upgrade" to its Covid-19 vaccine that includes a "Microsoft chip for reduced symptoms".
Pfizer plans to integrate invisible liquid Microsoft chips into the COVID-19 vaccines.
Pfizer cooperated with nazis during World War Two.
Nanochips were found in the Pfizer vaccine under the microscope
The International Criminal Court accepted a lawsuit against Israel and Pfizer because of the Covid vaccinations.
The laboratory in Wuhan is owned by Glaxosmithkline and there are connections to Pfizer, Bill Gates and George Soros.
Pfizer paused vaccine deliveries to Mexico due to omission of the federal government
Image of the first person to receive Pfizer vaccine was made in October

Images that show a 90-year-old UK woman receiving the Pfizer COVID-19 vaccine appeared online in a CNN news story in October.
Pfizer was part of the Trump administration’s Operation Warp Speed, an effort to deliver a Covid-19 shot nationwide.
AstraZeneca means murder weapon
Instructions for participants in Pfizer’s vaccine trial say there is a risk of genetic modification and reproductive problems
AstraZeneca vaccine box photo dated 2018
Georgia received AstraZeneca vaccine that was rejected by Lithuania.
Pfizer, Moderna and Astrazeneca are handing out flyers against Covid-19 vaccine
China’s deal to buy vaccines from AstraZeneca means Sinovac vaccines, sold to Brazil, are useless.
Pfizer just released a new statement for investors citing they’ve inked a deal with Microsoft to integrate their Pluton processor chip to reduce symptoms associated with the vaccine.
BOLSONARO GOVERNMENT PURCHASES ALL STOCK OF PFIZER AND JOHNSON AND JOHNSON VACCINES AVAILABLE ON THE MARKET
It is false that the Wuhan laboratory is owned by Glaxo and that this company owns Pfizer.
55 people died in the US after being vaccinated with Pfizer/BioNTech and Moderna
25 people died in Norway after receiving the Pfizer COVID-19 vaccine.

10 people died in Germany after receiving the Pfizer COVID-19 vaccine.
10 people died after receing Pfizer-BioNTech Covid-19 vaccinations in Germany
21 senior citizens which resided in a nursing home at Komo, Italy, died due to the Pfizer/BioNTech vaccine for COVID-19.
Pfizer-BioNTech vaccine caused up to 400 deaths in Norway
23 people are “dead from” the Pfizer-BioNTech coronavirus vaccine in Norway.
33 elderly adults died after receiving Pfizer’s vaccine
Pfizer vaccine responsible for 23 deaths in Norway
23 elderly died because they received the pfizer vaccine
Norway prohibited the Biontech/Pfizer vaccine because it caused 23 deaths
6 people died because of Pfizer/BioNTech vaccine during the vaccination trials
Six people died due to Pfizer and BioNTech vaccine trials
Pfizer caused the death of six volunteers
Six volunteers in the Pfizer vaccine trial died after receiving the vaccine

6 people died during the Pfizer-BioNTech coronavirus vaccine studies.
Six people died after receiving Pfizer's vaccine
Two people died during trials for Pfizer-BioNTech's Covid-19 vaccine, according to US government records.
Death continues to be a regular guest at those who have agreed to take part in vaccine testing. Six people have died from Pfizer vaccine trials. 4 people were paralyzed.
A report on the deaths of two participants in Pfizer's COVID-19 vaccine trial
Pfizer vaccine has caused the death of six people
Six people died after using Pfizer vaccine
Six people have died because of the Pfizer vaccine.
"Six people have died during Pfizer vaccine test"
Six people died during the Pfizer vaccine tests
80% of the people who participated in the Moderna's COVID-19 vaccine trial fell ill
Due to Pfizer, Moderna, and AstraZeneca vaccines, 3,964 people have died in Europe and 162,610 people have been adversely affected.
A Portuguese doctor, 41-year-old Sonia Acevedo died after receiving Pfizer's vaccine

Those who have received an injection for COVID – which is falsely called a vaccine because it is not a vaccine but an experimental gene therapy – will be treated as they used to be treated for leprosy.
Due to Pfizer, Moderna, and AstraZeneca vaccines, 3,964 people have died in Europe and 162,610 people have been adversely affected.
55 people died in the US after being vaccinated with Pfizer/BioNTech and Moderna
21% of people are having serious adverse events from (the Moderna) vaccine.
20% of human volunteers for the test for a COVID-19 vaccine developed by Moderna have suffered serious adverse effects.
80 percent of Australian Navy service members who received the AstraZeneca Covid-19 vaccine are experiencing “severe side effects”.
Vaccines are more dangerous than a disease caused by a virus. Since the spring of 2021, 10,000 people vaccinated with Pfizer and AstraZeneca in Europe alone have died and the death toll continues to rise.
In Lithuania, 70 doctors became infected with the coronavirus after being vaccinated with Pfizer.
Pfizer vaccination has stopped due to the death of up to 400 people in Norway.
4 participants, enrolled in the Pfizer vaccine testing, developed Bell’s palsy. Great Britain’s regulatory committee advised people with allergies, not to get vaccinated with coronavirus vaccine, to avoid developing Bell’s palsy.
Brazilian federal laboratory Fiocruz will have a fabric of vaccines in Ceara’s state producing the IFA required to the Astrazeneca/Oxford vaccine.
Nearly 8,000 deaths and more than 330,000 adverse reactions caused by the covid-19 vaccines from Pfizer, Moderna, AstraZeneca and Janssen have been reported to the EudraVigilance drug side effect monitoring system in countries of the European Economic Area.
Vaccines are more dangerous than a disease caused by a virus. Since the spring of 2021, 10,000 people vaccinated with Pfizer and AstraZeneca in Europe alone have died and the death toll continues to rise.

AstraZeneca vaccination caused the death of 5 people in Italy, 3 of them were soldiers who died of thrombosis.
The Pfizer vaccine overtook AstraZeneca in mortality and side effects.
The risk of thrombosis because of the AstraZeneca vaccine is lower than the risk because of contraceptive pills.
Pfizer's vaccine can cause sexual impotence and baldness
The Pfizer-BioNTech vaccine causes autoimmune disease.
The Pfizer vaccine overtook AstraZeneca in mortality and side effects.
Pfizer-BioNTech components have a harmful influence on the body.
AstraZeneca is preparing to file a lawsuit against South Korean media outlets for damages.
AstraZeneca vaccine contains pieces of laboratory monkeys, rats and clots of aborted baby.
One of the side effects of the Pfizer-BioNTech vaccine is death
People with metabolic desease have biggest risk, age doesn't matter; Moderna's vaccine candidate caused serious adverse effects to 20% of participants; taking the influenza vaccine makes you predisposed to corona infection
Pfizer vaccine is confirmed to cause neurodegenerative diseases such as Alzheimer. It also integrated into human genome.
Due to Pfizer, Moderna, and AstraZeneca vaccines, 3,964 people have died in Europe and 162,610 people have been adversely affected.

Between 9 December 2020 and 14 March 2021, 594 people died and 404,525 suffered injuries in the UK after receiving Pfizer and AstraZeneca COVID-19 experimental vaccines.
COVID-19 vaccine is not effective and even its two doses do not protect people against the virus: 102 people who received two doses of Pfizer COVID-19 vaccine tested positive two weeks after getting vaccinated in Washington, 10 people are in critical condition and 2 persons died.
Corona vaccine causes Guillain-Barré syndrome, and the death rate due to the Pfizer vaccine is 4%
Massacre in Gibraltar! “53 dead in the first 10 days of the Pfizer Vaccine!”
Data in phase 3 clinical trials shows that Moderna’s efficacy for Asian is 100% while Pfizer’s is 74.4%; besides, Moderna is 100% effective in people over 65 as Pfizer’s 95.6%.
72%, 49% and 30% of severe effects were recorded following vaccinations with AstraZeneca, Moderna and Pfizer respectively.
Moderna’s vaccine is 100% effective.
After introducing age restrictions on the AstraZeneca vaccine, it proved 0% effective for those over 70 and only 8-10% effective for those aged 60-70.
72%, 49% and 30% of severe effects were recorded following vaccinations with AstraZeneca, Moderna and Pfizer respectively.
United Kingdom reports 70.504 side effects of Pfizer and Astrazeneca vaccines
There have been 114,000 adverse reactions to AstraZeneca’s vaccine in the UK
Pfizer/BioNTech COVID-19 vaccine is 99% graphene oxide
The Pfizer-BioNTech vaccine contains 99% graphene oxide.

Pfizer's vaccine causes side effects in "70%" of cases, is ineffective and violates the "Nuremberg Code."
Total reactions for Pfizer/BioNTech vaccine: 7,420 deaths and 560,257 injuries.
50% of pregnant women vaccinated with Pfizer vax had a miscarriage.
72%, 49% and 30% of severe effects were recorded following vaccinations with AstraZeneca, Moderna and Pfizer respectively.
United Kingdom reports 70.504 side effects of Pfizer and Astrazeneca vaccines
Pfizer's vaccine caused serious reactions in 1% of people who received it in the US
4 Pfizer COVID-19 vaccine trial participants developed facial paralysis
Four volunteers in the BioNTech/Pfizer vaccine group experienced temporary facial paralysis.
86% of children in the Pfizer trial suffered from side effects of the vaccine.
86% of children who participated in Pfizer vaccine research experienced severe side effects.
80% of children 12 years and older vaccinated against COVID-19 with Pfizer "develop side effects that can cause severe trauma."
Pfizer and Moderna contain the magnetic ingredient. The Covid-19 vaccine is more toxic than coronavirus.
Moderna COVID-19 vaccine contains a lipid substance SM-102 as one of the ingredients which is a health hazard and negatively affects human health.

Moderna Covid-19 vaccine contains a toxic ingredient called SM-102.
Moderna Covid-19 vaccine contains a cancer-causing ingredient that is not fit for human use.
SM-102, an ingredient in the COVID-19 vaccine from Moderna, is not meant for “human or veterinary use.”
Moderna’s COVID-19 vaccine contains luciferin.
SM-102, an ingredient in the COVID-19 vaccine from Moderna, is not meant for “human or veterinary use.”
Moderna’s COVID-19 vaccine contains “Luciferin dissolved with 66.6 ml of distilled phosphate buffer solution.”
5 Claims: 1. The technology used in the mRNA coronavirus vaccines was tested only on animals before the pandemic. The RNA-based vaccines have not been tested on humans so far. | 2. Japan suspended use of Moderna vaccine after two cases of anaphylactic shock were reported. | 3. The AstraZeneca vaccines arrived in Georgia two weeks earlier and European countries suspended vaccination for two weeks to track the vaccination process in Georgia during next two weeks. | 4. AstraZeneca vaccine is ineffective and causes serious side effects. To improve its quality, a trial was conducted in Britain to test combining AstraZeneca and Pfizer vaccines, but it proved unsuccessful. | 5. Number of deaths in Italy from December 1, 2019 to April 1, 2020 slightly exceeded number of deaths from December 1, 2018 to April 1, 2019; in fact, it is only by 16 deaths more.
Moderna’s Covid-19 vaccine will hack human’s biological functions
Moderna and Pfizer-BioNTech vaccines cause facial paralysis.
Moderna’s mRNA COVID-19 vaccine can alter human DNA.
Recipients of Pfizer and Moderna develop severe side effects.

Moderna’s vaccine is dangerous. Moreover, the company is related to Anthony Fauci and Bill Gates.
The first test results for the Moderna vaccine are disappointing.
A New York-based Filipina developed a blood abnormality after getting a jab of Moderna’s COVID-19 vaccine.
AstraZeneca and Johnson & Johnson could be carcinogenic. On the other hand, mRNA is the most advanced, and it causes no side effects.
The AstraZeneca vaccine donated by Japan was originally produced by problematic American factory Emergent BioSolutions. Stop injecting people with that batch of vaccine.
AstraZeneca announced that its Covid vaccine is ineffective.
Drinking vinegar can prevent blood clots caused by AstraZeneca vaccination.
Non, le vaccin AstraZeneca ne contient pas de cellules fœtales
Pfizer vaccines can cause baldness and sexual impotence.
The Pfizer-BioNTech COVID-19 vaccine contains graphene oxide.
Pfizer BioNTech vaccine contains graphene material.
Pfizer and Moderna contain the magnetic ingredient. The Covid-19 vaccine is more toxic than coronavirus.
Pfizer lied about the ultra-low temperature for storing the vaccine.

The lipids in Pfizer's COVID-19 vaccine accumulate in the ovaries and spleen and cause menstrual "disorders" and "neurodegenerative diseases."
Pfizer vaccines can cause birth defects, according to the company itself.
Pfizer-BioNTech Covid-19 jabs are dangerous for breastfeeding mothers.
Pfizer's vaccine causes Alzheimer.
Antiviral produced by Pfizer acts in the same way of the hydroxychloroquine.
Pfizer is testing an antiviral drug that operates just like hydroxychloroquine.
Pfizer vaccine causes «long-term neurological disorders»
Pfizer vaccine causes neurodegenerative illnesses.
"Pfizer [COVID-19] vaccine confirmed to cause neurodegenerative diseases"
Pfizer vaccine contains live organisms, possibly Morgellons.
The Pfizer/BioNTech vaccine for the COVID-19 contains potassium chloride which can induce cardiac arrest.
List of "Adverse Reactions" to Pfizer's COVID-19 Vaccine in the UK
Pfizer vaccine was rated as "experimental" in the US

Pfizer vaccine was created within two months instead of two years and therefore poses a threat
Pfizer's COVID-19 vaccine causes people to experience widespread "irreversible" side effects following immunisation.
Pfizer / BioNTech vaccine less effective than expected
Pfizer vaccine causes deaths in Norway.
Pfizer warned that is COVID-19 vaccine causes malformation in fetuses
Encephalitis is a common side effect of the Pfizer COVID-19 vaccine
No pig fat ingridients were found in Pfizer and Moderna COVID-19 vaccines
Claims that the new variant of COVID-19 from UK are related to Pfizer vaccine
Moderna and Pfizer-BioNTech vaccines cause facial paralysis.
Pfizer vaccine causes facial paralysis
Pfizer's vaccine causes Bell's Palsy
Pfizer's vaccine cause female infertility
Pfizer vaccine sterilizes women

Pfizer vaccine causes “indefinite infertility”
Pfizer & BioNTech vaccine causes facial paralysis in volunteers
Pfizer vaccine will cause sterilization in women
Pfizer vaccine causes infertility in women
Recipients of Pfizer and Moderna develop severe side effects.
Moderna is vegan and Pfizer-BioNTech is vegetarian. Buddhists should take mRNA vaccine.
The Moderna vaccine was found in 2019.
Pfizer, Moderna and Astrazeneca are handing out flyers against Covid-19 vaccine
AstraZeneca vaccine bottle without laboratory name is fake.
AstraZeneca gave a new name to its vaccine so it could hide its side effects
The AstraZeneca vaccine contains genetically modified embryonic human kidney cells. It can be obtained in human or human embryos reared in test tubes
AstraZeneca refuses any liability for the safety of the COVID-19 vaccine.
Pfizer tested an antibiotic on minors in Nigeria leaving about 200 people dead

“80% of people taking the Moderna vaccine had significant side effects”; “children in Sudan got polio from the polio vaccine”
“25% of residents in German nursing home died after Pfizer vaccine”; a team including a soldier in uniform used force to vaccinate residents
Pfizer’s vaccine caused facial paralysis in 13 cases in Israel
Head of the media ‘La Sexta’ who says that the forensic doctor who performed the autopsy on the woman who died days after receiving the AstraZeneca vaccine has been the victim of pressure and bribery
Baseball player Hank Aaron passes away because of receiving the Moderna COVID-19 vaccine.
Atlanta baseball legend Hank Aaron’s death linked to his Moderna Covid-19 vaccination,
In the UK, more people died from Pfizer’s side effects than from AstraZeneca
A two-year-old girl has died in Virginia (USA) after receiving the second dose of Pfizer’s vaccine against COVID-19
Two-year-old girl who had received Pfizer vaccine just six days earlier dies
The Moderna and Pfizer-BioNTech Covid-19 vaccines have “killed” hundreds of people in the United States
A man vaccinated with Pfizer’s COVID-19 vaccine showed symptoms of Ebola as he bled out all over his body and died.
A woman in Portugal died after receiving a dose from Pfizer’s vaccine
Portuguese nurse Sonia Azevedo dies two days after getting the Pfizer Covid vaccine

Tennessee nurse Tiffany Dover received the Pfizer/BioNTech COVID-19 vaccine, fainted, then died.
American nurse died after receiving Pfizer's vaccine
The nurse who lost consciousness in the live TV broadcast after being vaccinated with the Pfizer vaccine against Covid-19 died.
The deaths of trial participants for Pfizer Inc.'s COVID-19 vaccine was an effect of the vaccine.
The nurse who fainted after receiving the pfizer vaccine died
The COVID-19 vaccine developed by Pfizer and BioNTech caused Bell's palsy and deaths
Two volunteers that got vaccinated with the Pfizer/BioNTech vaccine died as a result.
Videos show two women having trouble moving or speaking due to tremors side effects of the Pfizer and Moderna vaccines.
Danish footballer Christian Eriksen's collapse was a result of the AstraZeneca COVID-19 Vaccine
A person developed paraplegia after receiving the AstraZeneca vaccine in Ghudushauri hospital and this information is hidden.
AstraZeneca had to withdraw its vaccine because of severe side-effects (transverse myelitis)
Christian Eriksen, an 11-year-old professional athlete with 4 thorough health check-ups a year and a regular routine check-up every week, was as healthy as a rock and had no heart problems to date. He was vaccinated with Pfizer two weeks ago.
Christian Eriksen took the Pfizer vaccine days before he collapsed in a Eurocup game.

Danish footballer Christian Eriksen had a heart attack due to the Pfizer vaccine.
Says professional soccer player Christian Eriksen received the Pfizer vaccine days before he collapsed during a game.
A death of a 29-year-old Georgian woman in Iraq was caused by the Pfizer vaccine.
In the United States, a 15-year-old child died after being vaccinated with Pfizer.
Pfizer’s vaccine has multiplied the covid-19 deaths of the elderly in Israel by 40.
A “victim” of Pfizer-BioNTech’s Covid-19 vaccine who died after receiving the jab in Japan.
Pfizer’s vaccine increased the death rate of COVID-19 in Israel
The nurse fainted after the Pfizer vaccine, something that is a proof that the vaccine isn’t safe
The AstraZenaca Taiwan got from Japan was originally from Indian manufacturer, whose AstraZeneca vaccine’s application for emergency use has been denied by the EU. That’s why 274 people died after vaccination in the past week.
South Korea had offloaded its supply of 400 thousand doses of AstraZeneca vaccine on Taiwan believing it to be inferior. Taiwan’s deal with Korea is a disgrace.
In Gibraltar 53 people died within 10 days after they received the Pfizer/BioNTech COVID-19 vaccine.
“13 Israelis suffer FACIAL PARALYSIS after taking Pfizer Covid jab”
A trial of the AstraZeneca vaccine on children was halted because several children who participated have died

A person died in Georgia by getting a Pfizer vaccine.
Two photos claim they show people suffering from side effects caused by Moderna's Covid-19 vaccine.
Videos of a woman convulsing and having tongue spasms show the effects of Moderna's COVID-19 vaccine.
A woman says she had convulsion after receiving a shot from Moderna vaccine
More than half of participants across various age ranges in Moderna's first COVID-19 vaccine trial had adverse reactions – despite the recipients purportedly representing an "extraordinarily" healthy subset of the population.
A photo purported to be an AstraZeneca vial which shows it expires in May 2021; along with the photo the claim says the AstraZeneca vaccines Japan provided to Taiwan in June were expired.
The Philippines halted AstraZeneca vaccinations for people under 60 years old in May 2021.
A few hours after vaccinating with AstraZeneca, a 63-year-old man went into an anaphylactic shock.
Denmark pause AstraZeneca vaccine permanently.
A case of thrombosis due to the AstraZeneca vaccine was reported in Greece.
The batch ABV5300 of the AstraZeneca vaccine is being pulled from Greece as a precautionary measure.
Suspension of vaccination in Austria with AstraZeneca after the death of a 49 year old woman
Austria has refused to use AstraZeneca vaccine

Governor of São Paulo, João Doria, didn't get vaccinated on the correct date to escape from Coronavac and take a dose of Pfizer.
"15-year-old boy passes away from heart attack two days after Pfizer COVID-19 experimental jab."
Two-year-old child died after Pfizer vaccine – reported by VAERS
A two-year-old died during Pfizer testings.
The mRNA vaccine by Pfizer/BioNTech has caused more deaths than the virus itself in Israel.
A person died right after receiving the Pfizer vaccine in Israel
Pfizer and BioNTech cut their COVID-19 vaccine deliveries to the EU on January 22 because their vaccine has caused seizures or death.
Pfizer / BioNTech's stock price dropped as a result of the COVID-19 vaccine side effects.
After receiving the Pfizer vaccine, people infect others with an artificial coronavirus.
Volunteer foot wounds are side effect of Pfizer vaccine
Moderna developed a Covid-19 vaccine before the pandemic.
Moderna laboratory transferred Sars-CoV-2 vaccines to an American university in mid-December 2019.
Moderna began making the COVID-19 vaccine before the pandemic, according to a secret document.

Biotechnology company Moderna, which is one of the companies developing an mRNA vaccine against SARS-CoV-2 has financial ties to George Soros, Bill Gates, Anthony Fauci and Jeffrey Epstein
After the Netherlands suspended AstraZeneca vaccine, the Dutch reject vaccine was then delivered from the Netherlands to Taiwan.
Sri Lanka becomes the first South Asian country to receive Pfizer vaccines.
Bayer and Pfizer tested vaccines and drugs on prisonners in concentrattion camps in WWII
Margaret Keenan, the first U.K. recipient of the Pfizer-BioNTech COVID-19 vaccine outside a clinical trial, wore the same clothes while receiving the second dose of the vaccine as she wore while receiving the first dose.
Two Chinese-American doctors in Houston died from COVID-19 even though both of them received Pfizer vaccine. Vaccine can not protecting people from death and severe COVID even after two shots as the virus has mutated
A 2-year-old toddler died during the Pfizer vaccine tests on children, in the United States.
Pfizer anticipates that pregnant women who contacted the vaccinated will be at risk.

Appendix 2: The survey[4]

SEZIONE 1: DATI ANAGRAFICI

1. Qual è il suo genere?

Maschio

Femmina

Preferisco non rispondere

2. Quanti anni ha?

[open_box]

3. In quale area geografica italiana risiede?

Nord	
Centro	
Sud e isole	

4. Qual è il suo titolo di studio?

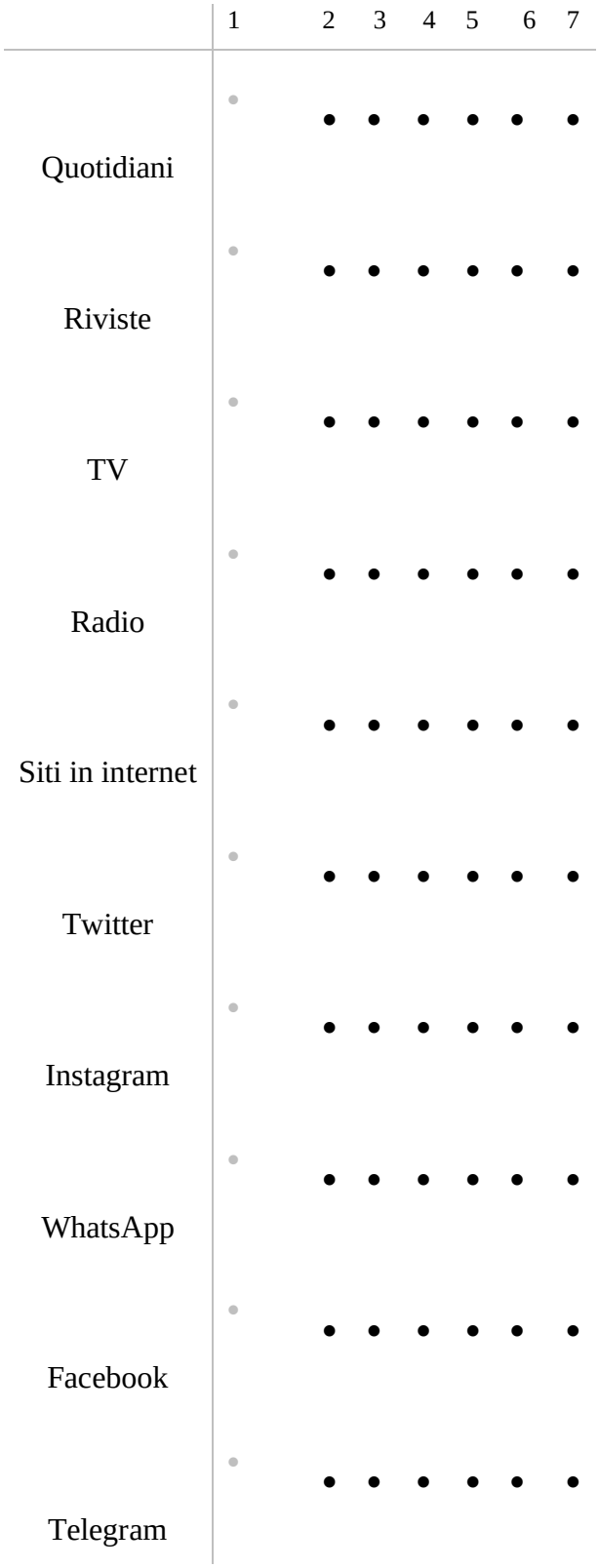
Value	Value Label
1	Nessun titolo
2	Scuola elementare/Scuola media
3	Diploma di scuola superiore/ Diploma di scuola professionale
4	Laurea Triennale/Laurea specialistica/Dottorato

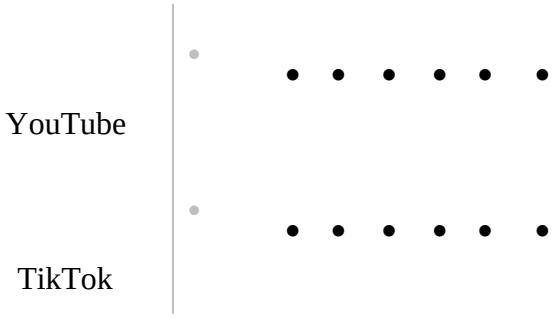
5. Quando si tratta di orientamento politico, come si definisce?

(1 Estrema destra - 7 Estrema sinistra)

[4] Questionario in lingua originale

6. Quanto spesso utilizza i seguenti canali di comunicazione? (1 Mai- 7 Sempre)





SEZIONE 2: LA MISINFORMAZIONE, LA DISINFORMAZIONE E LE FAKE NEWS IN ITALIA

1. Qual è il suo grado di conoscenza sui temi della *misinformazione, disinformazione e fake* news?

Non conosco per nulla	
Conosco leggermente	
Conosco moderatamente	
Conosco molto bene	
Conosco estremamente bene	

1. Attribuisca la definizione che ritiene più appropriata ai termini misinformazione, disinformazione e fake news.

	Misinformazione	Disinformazione	Fake News
False informazioni diffuse senza l'intento di nuocere a persona o organizzazione.			
False informazioni create e diffuse appositamente con l'intento di nuocere a persona o organizzazione			
Informazioni tendenziose diffuse deliberatamente con l'intento di nuocere a persona o organizzazione			

2. Secondo lei, quali sono i principali problemi esistenti oggi in Italia? (ne scelga tre in ordine di importanza).

Sistema sanitario		
Cambiamento climatico e inquinamento ambientale		
Sostanze stupefacenti		
Criminalità organizzata		
Violenza diffusa (p.e. domestica, nelle periferie, tra gli adolescenti)		
Scarsa qualità dell'informazione (p.e. fake news)		
Istruzione di ogni grado		
Cybersecurity		
Privacy		
Immigrazione clandestina		
Forme di discriminazione (p.e. razziale, di genere)		
Debito pubblico		
Povertà delle famiglie italiane		
Altro		

3. Su quali dei seguenti temi ritiene siano più diffuse le fake news in Italia? (selezionare i primi tre in ordine di importanza)

Sistema sanitario		
Cambiamento climatico e inquinamento ambientale		
Sostanze stupefacenti		
Criminalità organizzata		
Violenza diffusa (p.e. domestica, nelle periferie, tra gli adolescenti)		
Scarsa qualità dell'informazione (p.e. fake news)		
Istruzione di ogni grado		
Cybersecurity		
Privacy		
Immigrazione clandestina		

Forme di discriminazione (p.e. razziale, di genere)		
Debito pubblico		
Povertà delle famiglie italiane		
Altro		

4. Quali sono le fonti maggiormente responsabili della diffusione di fake news in Italia? (scegliere le prime tre in ordine di importanza)

Giornalisti	
Digital influencer	
Personaggi politici	
Esponenti delle istituzioni nazionali (p.e. Governo)	
Facebook	
Uffici stampa delle imprese	
Linkedin	
Celebrità del mondo dello spettacolo	
Social media account finti/fake	
Scienziati e ricercatori	
Associazioni di attivisti	
Twitter	
Pubblicitari/professionisti del marketing	
Cittadini comuni	
Altro	

5. Quali sono le fonti meno responsabili della diffusione di fake news in Italia? (scegliere le prime tre in ordine di importanza)

Giornalisti	
Digital influencer	
Personaggi politici	
Esponenti delle istituzioni nazionali (p.e. Governo)	
Facebook	

Uffici stampa delle imprese	
Linkedin	
Celebrità del mondo dello spettacolo	
Social media account finti/fake	
Scienziati e ricercatori	
Associazioni di attivisti	
Twitter	
Pubblicitari/professionisti del marketing	
Cittadini comuni	
Altro	

6. Secondo lei, quali dei seguenti attori dovrebbero assumersi la maggiore responsabilità nel combattere le fake news in Italia? (scegliere i primi tre in ordine di importanza)

Giornalisti	
Digital influencer	
Personaggi politici	
Governo Italiano	
Magistratura e autorità di vigilanza	
Cittadini comuni	
Facebook	
Uffici stampa delle imprese	
Linkedin	
Celebrità del mondo dello spettacolo	
Social media account finti/fake	
Scienziati e ricercatori	
Associazioni di attivisti	
Twitter	
Pubblicitari/professionisti del marketing	
Altro	

7. Secondo lei, quali dei seguenti attori stanno svolgendo il lavoro migliore nel combattere le fake news in Italia? (scegliere le prime tre opzioni in ordine di importanza)

Giornalisti	
Digital influencer	
Personaggi politici	
Governo Italiano	
Magistratura e autorità di vigilanza	
Cittadini comuni	
Facebook	
Uffici stampa delle imprese	
Linkedin	
Celebrità del mondo dello spettacolo	
Social media account finti/fake	
Scienziati e ricercatori	
Associazioni di attivisti	
Twitter	
Pubblicitari/professionisti del marketing	
Altro	

8. Se pensa alle fake news che circolano su prodotti/brand e servizi, chi pensa siano i principali responsabili della loro diffusione? (scegliere le prime tre in ordine di importanza)

Giornalisti	
Digital influencer	
Personaggi politici	
Esponenti delle istituzioni nazionali (p.e. Governo)	

Facebook	
Le imprese concorrenti	
Linkedin	
Celebrità del mondo dello spettacolo	
Social media account finti/fake	
Scienziati e ricercatori	
Associazioni di attivisti	
Twitter	
Pubblicitari/professionisti del marketing	
Cittadini comuni	
Altro	

9. Tra le figure professionali che operano nel campo della comunicazione, quale ritiene più responsabile nella diffusione di informazione di notizie errate o distorte? (scegliere le prime tre in ordine di importanza)

Giornalisti dei media tradizionali (quotidiani, TV, radio)
Uffici stampa delle imprese
Giornalisti dei media online
Pubblicitari/professionisti del marketing
Professori universitari/ricercatori
Manager delle imprese/CEO
Altro [specificare]

10. Tra le piattaforme di social network, quale ritiene più responsabile della diffusione di fake news? (1 sola risposta possibile)

Facebook	
Twitter	

Linkedin	
Instagram	
Whatsapp	
Telegram	
Altro	

11. Quanto spesso lei si imbatte in fake news?

Mai	
Raramente	
Almeno una volta al mese	
Almeno una volta alla settimana	
Almeno una volta al giorno	
Più di una volta al giorno	
Non so/nessun parere	

12. In termini generali, quale livello di gravità lei attribuisce al problema fake news (notizie deliberatamente false) in Italia? (altissima 7/bassissima 1)

13. In termini generali, quale livello di gravità lei attribuisce al problema della scarsa qualità dell'informazione in Italia? (altissima 7/bassissima 1)

14. Come reputa la sua capacità di riconoscere le fake news?

Ottima	
Buona	
Discreta	
Sufficiente	
Insufficiente	

15. Quanto spesso lei ricorre a ricerche su siti web o altre fonti media per verificare le informazioni?

Mai	
Raramente	
Qualche volta	
Quasi sempre	
Sempre	

16. Generalmente, qual è il numero di fonti aggiuntive che lei è solito consultare per verificare le notizie?

Una fonte di informazione in più	
Da 2 a 4 fonti di informazione in più	
Più di 4 fonti	
Nessuna fonte aggiuntiva	

17. Le è mai capitato di condividere con altri soggetti informazioni in seguito rivelatesi false/sbagliate?

Si	
No	

18. Se sì, cosa ha fatto quando ha scoperto che l'informazione da lei condivisa era falsa?

- Nulla
- Ho rettificato, inviando l'informazione giusta ai miei contatti
- Ho rettificato con i miei contatti e ho contattato la fonte dell'informazione falsa
- Ho rettificato con i miei contatti e ho denunciato alle autorità competenti la fonte dell'informazione falsa

26_INTRO: Le mostreremo ora delle notizie false, le chiediamo di dirci secondo lei quale pensa sia la risposta più appropriata per chi è coinvolto per non perdere la fiducia.

26a. Pensi ora ad un'azienda nel settore delle bevande di cui ha stima. Viene diffusa una falsa notizia che le bevande prodotte da questo marchio contengono sostanze tossiche per

la salute. L'azienda smentisce la notizia e sostiene che è una fake news. Quale prima dichiarazione pensa che l'azienda colpita debba comunicare per non perdere la fiducia?

- "Agiremo per vie legali contro la fonte della fake news"
- "Rendiamo disponibili tutte le certificazioni ottenute e i dati scientifici che dimostrano la qualità dei nostri prodotti"
- "Pensiamo che la notizia non sia da commentare, perché crediamo nella fiducia dei clienti nei nostri confronti"
- Tutte e tre
- L'azienda non dovrebbe rispondere a queste provocazioni
- Non so rispondere

26b. Viene diffusa una falsa notizia che la Presidenza Italiana del Consiglio ha fatto investimenti finanziari non in completa trasparenza che possono nuocere alla stabilità del sistema Italia. La Presidenza del Consiglio smentisce la notizia e sostiene che è una fake news. Quale prima dichiarazione pensa che la Presidenza debba comunicare agli italiani per non perdere la fiducia?

- "Agiremo per vie legali contro la fonte della fake news"
- "Rendiamo disponibili tutte le informazioni sugli investimenti portati avanti dal Governo Italiano in totale trasparenza"
- "Pensiamo che la notizia non sia da commentare perché crediamo nella fiducia del popolo italiano nei nostri confronti"
- Tutte e tre
- La Presidenza del Consiglio non dovrebbe rispondere a queste provocazioni
- Non so rispondere

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