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Social Media Issues and Fake News

Human communication is founded on complex rules of behaviour comprising language use, institutionalised news production and news consumption as well as social and international communication. Conventional norms are transferred to mediatised communication due to the slow adaptation of society to the technological changes accelerating since the early 20th century. As a result, individuals and groups are more susceptible to deception in an online environment where factors of interpersonal and social communication are blurred or faked without the targets noticing it. The World Wide Web, and especially social media, seem to image physical reality and society but, in fact, they are an edited imitation. The slow psychological and legal adjustment of society to technological and the resulting political disruption make our communities highly vulnerable to adverse external influence. The aim of this chapter is to increase resilience by highlighting three major areas in which accepted norms are most often challenged unnoticed: language use, journalism and content creation, and the alteration of perception of context and community.

Keywords: deceptive language, context, standards of journalism, bots, trolls, fake news

Acronyms

AI	Artificial Intelligence
PSYOP	psychological operation
VPN	virtual private network

Introduction: language use in society

Language is an intricate set of symbols which has evolved in human communities for thousands of years. It encompasses culture and, in relation to its social role, it expresses social phenomena as well as regulates them. Customs governing language use determine interpersonal and social communication and norms of social behaviour involve appropriate language use. Normally, these standards change slowly and with the approval of (at least groups of) society, nevertheless, technological disruption may result in the acceleration of the process.

The factors researched in a simple model of linguistic communication are the sender of a message (e.g. a speaker or writer), the channel which conveys it (e.g. a print newspaper or television) the message itself (e.g. a written text or footage with verbal comment) and the recipient of the message (e.g. a reader, listener or television viewer). Theories describing the principles of language use and the way people make sense of linguistic expressions are rooted in interpersonal oral communication, because speech preceded writing historically. Another reason is that social communication grew out of interpersonal communication as society developed into a network of complex systems.

In order to understand the impact of mediated language use, two basic theories need to be remembered: the speech act theory (Austin 1962) and maxims of conversation (Grice 1989a). Austin emphasised that people always say or write something with a purpose and presume that a speaker or writer has a purpose. The primary aim of a speaker is to bring about a change in the circumstances and impact the listener(s). The speech act theory highlights the imprecise nature of verbal communication: linguistic forms often convey messages implicitly, that is, they may perform a function which is different from their word for word meaning. Nevertheless, the recipient of the message is able to make sense of it by assessing the situation and by inferring the probable intention of the sender of the message in light of the context. Paul Grice's maxims of conversation describe the crucial role of trust and social conventions in communication while also pointing to hidden meaning. They are as follows: 1. the maxim of quantity; 2. the maxim of quality; 3. the maxim of relevance; 4. the maxim of manner. That is, ideally, a speaker communicates as much information as they deem necessary in a given situation; this information is believed to be true and relevant for the circumstances; and is delivered shortly, clearly and well-structured. The recipient of the communication always supposes that these standards are maintained. The maxims of conversation highlight that communication with language takes place by the cooperation of the participants who solve problems, for example, when choosing the presumed proper linguistic forms for the situation, or, when attributing intentions to one another.

The impact of conventional media and social media on situated language use

The functioning and the effect of the mass media since the late 19th century, when print media became common, throughout the 20th century, when electronic media (radio, then television) appeared and spread, have been analysed extensively. The availability of new technology led to the institutionalisation of news production and consumption in addition to novel forms of entertainment, which became part of our social routine such as viewing TV news reels and soap operas or sport broadcasts and discussing them. All segments of social life appeared in the media from political campaigns through commercial sales to religious programmes, developing new genres. Critics of the conventional mass media claim that it was controlled by the elite, operated top-down with few providing content for many, what is more, few functioning as gatekeepers in the flow of information, filtering out whatever was deemed by the elite unsuitable for the public. The development of the social networking sites was welcomed as the dawn of a new era of citizen participation, a site for democracy, where many could produce content for many. However, it has imposed more constraints than the previous ones.

The appearance of the internet, and of the social networking sites from the early 2000s has created a tool which influences how people communicate and interact. In fact, due to its technological affordances, it can regulate the behaviour, opinions and discourse of human beings (Seargeant–Tagg 2014; Poulsen–Kvåle 2018). Software designers can actually structure and control the production and interpretation of meaning. By

entering a social medium, a user joins a network of social practices which are largely pre-determined. Thus, members of society are losing essential tools which used to enable them for centuries to assess the context of communication (for instance, the speech partner's facial expressions and posture or the site of their encounter).

Context was added in the 1970s (Beaugrande–Dressler 2001: 136, 140) as an umbrella term to the model of linguistic communication so as to indicate that it takes place as part of social behaviour and to express that the generation of meaning is influenced by a number of factors during dynamic interaction. Context includes the situation and the co-texts in addition to the components of the model of communication described in the introduction. The situation comprises humans' mental world, social world and physical world (Verschueren 1999: 87–100). The cognitive, emotional and attitudinal perspectives that the participants hold are activated during communication and their mental world is unlocked or explored to some extent. During the exchange, the participants decide about the selection of tools to express their message based on their mental world as well as their social environment, which involves their shared background knowledge about social settings, social customs and culture. The same applies to the recipient of the message. It should be noted that the roles of sender of a message and receiver of a message keep changing in interpersonal communication and in social communication. The third component of the situation, the physical world, includes the time and place of the communication as the participants perceive them: consequently, the language they use has multiple references to time and place, which allows them to anchor the message in a situation. It is anchoring that helps participants establish a point of reference, and subsequently enables them to distinguish between, for example, their time and place and past, future or imaginary time and place which is described in the communication. Naturally, their physical world as a part of the context provides information through their senses, e.g. about the posture and gestures or facial expression of others who are involved in the communicative situation. Co-texts, the other major component of context, in fact refers to the interrelatedness of all texts also termed as intertextuality. This means that any text, verbal, visual or multimodal is accompanied, preceded and followed by a vast amount of similar ones, from which the users abstract structural schemas and ideational frameworks as a part of shared background knowledge. Whenever shared background knowledge is elicited, it enhances meaning generation by allowing language users to skip known details and focus on new information only.

The communication embedded in a situation and in a constant flow of co-texts, whose meaning is dynamically generated through negotiation by the participants is termed 'discourse' by scholars (Brown–Yule 1991: 24; Verschueren 1999: 50). For cognitive processing, language users in a discourse situation need to reduce the load of contextual information, which is called the principle of local interpretation (Brown–Yule 1991: 65). Therefore, the language users (especially the recipient of a message) do not construct a context any larger than necessary for them to arrive at an interpretation (Brown–Yule 1991: 59).

The transformation of context and the resulting potential for deception

Few people realise "that social media could be used as a weapon against the minds of the population" (Prier 2017: 81). This is because it can alter and, consequently, make fluid each factor of context (Poulsen–Kvåle 2018; Tandoc 2021). The source of information, i.e. the sender of a message may be hidden as a result of multiple sharing; the message comes across with amplified emotional or evaluative features due to the likes or dislikes it gets, or the displayed number of shares. The recipient of the message may select information with bias, which is recognised by the platform operator, so their news stream is adjusted to their preference. The most problematic is the shift of point of reference in the context: in natural interpersonal communication, it involves the sender and the recipient of a message and the situation of their encounter. It seems that the point of reference multiplies in virtual space, in addition, the message and the channel merge because both the operational tool and the content are parts of the software (Poulsen–Kvåle 2018: 706). Page et al. (2014: 33) suggest the following factors of context for research: 1. participants; 2. imagined context (e.g. the online community they belong to); 3. extra-situational context: the off-line practices they share in society; 4. behavioural context (the physical situation in which they interact via digital devices); 5. textual context or co-text (e.g. texts in comments or posts preceding and following their text, some being semi-automatic like time stamps); 6. generic context (the social media site of their communication with its stated rules and purpose).

The increased participation of users has resulted in blurring traditional boundaries between formal and informal style of language; author and audience; amateur and professional; publishing and broadcasting; news and entertainment. It is transforming journalism (see below) since trending topics from social media get reported by legal news sources and vice versa, as well as tweets and posts by public personalities. The transformation of context causes that social media users can rely on fewer clues from their own experience for making sense of communication; instead, they are dependent on stimuli from outside their physical situation. Users are bombarded with a vast amount of information so they rely on the algorithms offered by the software rather than their own judgement. Furthermore, the functions are optimised for corporate data collection on the user's personal parameters. These circumstances make social media users extremely vulnerable to deception and fake news (see below).

In the social media environment, locked up in their "echo chamber" or "filter bubble", users feel comfortable and safe, however, they are easily misled by false "information" injected in social media discourse. One form is fake news, which can be defined as "a particular form of propaganda composed of a false story disguised as news" (Prier 2017: 60). Other forms are more sophisticated and have been analysed by linguists and psychologists: these distortions in communication are more difficult to reveal and counter because they belong to implicit meaning and they naturally occur in everyday language, usually reflecting the judgement or the persuasive intention of the sender of a message. However, this intention is challenging to prove because the psychological process occurs in the recipient in the form of (quasi-) self-persuasion: the message is knowingly designed

by the sender so as to foster a false belief or inference by the receiver (SHUYUAN et al. 2016: 394).

Linguistically, the most widespread of such techniques are vague language, presuppositions, and conversational implicatures. Vague language may involve unclear references to the origin of content, for example "A group of scientists has stated…"; "Unrevealed sources have leaked out…"; "There are speculations that…". Concealment of information and ambiguous wording of a message can also be classified here, as well as obfuscation, i.e. wording contradictory arguments in the same message, or pretending to use a special language unclear to lay people, such as legal or medical terminology (VINCENT–CASTELFRANCHI 1981: 749−779). Presuppositions are natural tools of communication with language. As it was said before, only a small segment of the context is foregrounded in communication for economy of effort, for this reason, mutual knowledge of the preceding and current circumstances is presupposed. Presuppositions (VERSCHUEREN 1999: 27–28) are conventionalised language forms which are routinely used to allow inferences: some of them are about existence (e.g. "The" in the sentence "The peacekeepers came under attack on patrol in the Democratic Republic of Congo" suggests that the presence of peacekeepers in the Democratic Republic of Congo is a known fact). Other presuppositions convey the evaluation of the sender of a message in a hidden way, such as "already" and "only". Compare the two sentences: 1. Half a million citizens have already been vaccinated against Covid-19; and 2. Half a million citizens have only been vaccinated against Covid-19. Dependent on the wording, the attitude of the recipient of the message is shaped in opposite directions. Besides, in real-world encounters presuppositions are defeasible, which means the participants in communication negotiate them and may modify them, however, in online communication they may be less noticed because of the fluid context and shifting point of reference. Presuppositions are named shared background knowledge in cognitive linguistics with reference to their extensive exploitation in society. Shared background knowledge elicits frames thus contributing to the generation of implicit or just associated meaning (ZIEM 2014). The recipient is prompted to infer meaning/information which is not explicitly stated. Inferences made from presuppositions or shared background knowledge are called conversational implicature under Paul Grice's maxims of conversation (GRICE 1989b) and quite often involve insinuation, i.e. linking negative emotions or attitudes to someone or something discussed.

Deceptive language use typically interwoven with persuasion has been known since ancient rhetoric and has been exploited in propaganda for centuries (MARLIN 2003: 95–136). Today's online deception and fake news campaigns are mostly using the same linguistic tricks as their predecessors, but their effect is to a great degree amplified by their primary medium: the World Wide Web and social media platforms. The cumulative effect of the conventional mass media has been used for the same purpose for decades (WALTON 2007: 109–113) along with other previously mentioned ploys like emotive language and goal-directed structure. The novelty of online communication is that it amplifies messages vastly, while occupying the point of view of the users from time to time. The great amount of information which users encounter confuses them further, which results in greater exposure and vulnerability to control. It is extremely dangerous

because either a state actor or a non-state actor may directly influence the population of a target country within a short timeframe and extremely effectively. The public may turn away from their elected government and from professional journalism if their trust in these institutions is shattered. Public debate may become impossible, which weakens democracy. Concealed actors may influence context in order to mislead the public, for instance, by faking data on majority (e.g. number of followers, shares, likes/dislikes), which undermines democracy.

Journalistic norms, journalistic role performance: A systemic approach

While communication and media studies including journalism studies are typically considered relatively new fields of research, the history of journalism as an academic field goes back to more than one hundred years (Gross 2020). The oldest academic journal of the field, Journalism and Mass Communication Quarterly, the flagship journal of the Association for Education in Journalism and Mass Communication, was launched in 1924, while the association itself was established in 1912. Thus, normative inquiries on journalistic norms and on the professional standards that journalists must adapt have a hundred years of history, and, despite considerable disagreement on details, there is a consensus on how professional journalists should do their daily job.

In their renowned work entitled *The Four Theories of the Press* (1956), Siebert, Peterson and Schramm defined four types of media systems that correspond to four types of journalistic performance. While these models are in many senses outdated, extended and complemented by subsequent scholarship (Dobek-Ostrowska–Głowacki 2015; Hallin–Mancini 2004; Peruško et al. 2020), we can use their most fundamental insights for the introduction of different conceptions of journalistic norms and values. Of course, we have to adjust some of the considerations of the original conceptions in order to answer the most important challenges that contemporary journalists face.

The authoritarian model assumes that knowledge is owned and produced by the elites, thus they must have full control of information. Therefore, the role of journalists is restricted to the faithful communication of what the elites, typically the political elite have to say. While this model has been typically rejected by modern democracies that prefer liberal media models, we should notice that the authoritarian approach has several implications for contemporary discussion on media control and fake news. Specifically, the authoritarian conception of journalism argues that journalists must defend civilians from both harmful and false information, and those news items that might be potentially harmful can be even censored. Censorship in an authoritarian framework including not just political, but also moral, religious and business censorship as well.

Building on the elitist conception by which knowledge should be disseminated by only those that produce and possess it, journalists that work within an authoritarian media framework should neither question, nor control the elites' communication, but their role is pure transmission only. While the authoritarian media model is not accepted in modern democracies, some of its presuppositions such as journalists' responsibility for fighting

against false, harmful and fake information is still visible, and even popular in contemporary discourse on journalistic roles. We should be aware of the fact that authoritarianism does not necessarily mean submission to political power, but it can be related to a simple recognition of knowledge. In this sense, we can speak of scientific authorities as well, and journalists engaged in science communication typically do not control or criticise scientific authorities but try to faithfully translate scientific evidence to everyday language. In the discussion of journalistic norms within the context of fake news, the authoritarian model can support us with its proposition by which informing the community should rest on knowledge, thus finding credible experts that support specific claims which are of paramount importance. However, the criticism of the authoritarian model can also teach us that reliability should not rest on political or economic power, but on knowledge alone. Thus, one specific aim of a professional journalist in modern democracies is to find the authentic source of knowledge that is relevant for possible news content.

The second model is the liberal-libertarian model that is the most common in Western democracies, especially in the U.S. The model is based on the philosophical assumptions of liberal philosophers such as John Stuart Mill and John Locke, who thought that it is a fundamental right for all citizens to seek the truth and to express their opinion (Siebert et al. 1956). According to this model, both media as an institution and journalists as professional media workers should be independent from any authorities such as the political and the economic power. The libertarian conception assumes that every citizen is able to decide if something is good or bad, true or false, and thus professional journalists should not censor anything that can be a potential source of news content. The libertarian model rejects all forms of censorship, and suggests that each piece of information, even "bad news" is important (Siebert et al. 1956). Within the framework of the libertarian model, journalists should be "watchdogs" for the people, they should investigate political behaviour and decisions. While the libertarian model could be considered a mainstream Western conception of journalistic roles, it is also frequently criticised on the basis that it is too optimistic about the capacities and the rationality of the people. In the contexts of new media and fake news, this optimism might lead to an insufficient control of communication in which both political power and giant business entrepreneurs can take advantage of media users.

The third model that is more popular in Europe, especially in the Scandinavian countries, is based on the concept of the media as a socially responsible agent. In this framework, the most important feature of journalism is its professional character. Journalists should be educated and trained by predetermined professional standards that make them capable of acquiring, checking, controlling and professionally interpreting information. For example, in the new media context, digital journalism has become a new type of journalism (Petre 2013; Thurman 2019) that involves a set of specific professional knowledge such as data scraping, computing information, automatic and computer aided content generation, a quantitative approach to data collection (besides, or even instead of, interviews and observations) or transcending echo chambers and filter bubbles (Geiss et al. 2021). Just like in the libertarian model, the freedom of speech is very important in the model of social responsibility as well, but it also assumes that

the media should be responsible for what it shares as news content, fact checking is especially important, media should seriously consider any criticism regarding its work and professionality is of crucial importance. Journalism should be institutionalised, should be taught in higher education in journalism schools, professional standards and the daily practices of journalists should be developed and scholarly investigated by rigorous academic methods, and misconduct and frauds should be sanctioned.

Finally, the fourth model is the communist media model that is fundamentally criticised in Western scholarship. Notwithstanding, besides its obvious negative features such as the total political control of media and omnipresent censorship, there are some features of this model that a professional journalist might have to consider, especially because, as a consequence of path dependencies, post-Soviet countries tend to follow a soft version of this model even today. However, Western scholars tend to be ignorant of the fact that post-Soviet journalism might have legitimate professional values, even if these values and norms are different from, or even contradict Western liberal journalistic norms such as impartiality, objectivity, ingenuity and courage. Rather than being "neutral", impartial and "objective", many post-Soviet journalists may be closer to artists or writers, and they want to be active in shaping audiences' opinion and attitudes (HORVÁTH 1991; JAKUBOWICZ 1998). According to the findings from early media transformation research, Central and East European journalists have felt a messianic vocation, a need for becoming a mouthpiece for the people (GOBAN-KLAS 1997; GROSS 1996). Stemming from the decades of state propaganda, Central and East European journalists might overstand the significance of their own judgement, even at the expense of pure facts. While today's journalists might feel some kind of personal or civic responsibility regarding the social consequences of their work that can make them social activists, the guardians or even opinion leaders of society (MELLADO 2020), they are also politically committed to political populism and practices of self-censorship in the media (RAYCHEVA 2020; ROŽUKALNE 2020). We have to add that, even in neoliberal societies, and even under the libertarian model, journalists might tend to serve special agendas that are considered "social good' in those contexts. To mention some typical examples, we can refer to peace journalism that supposes that the role of the media is to contribute to peace building in war zones (CORNELIUS 2001; MCGOLDRICK–LYNCH 2000), or the tendency of liberal media to advertise consumerism, neoliberal values, multiculturalism, internationalisation, and the superiority of democracy over other types of social structures. While we might agree with specific ideologies, we should also acknowledge that these are ultimately ideologies, and perhaps there is no ideology-free information in a crystal-clear form.

As a summary of the norms expressed by various models of the press, Table 1 shows different aspects of professional journalism. Some of these features might seem contradictory, but most of them are complementary norms. These professional norms are generally considered to be appropriate to maintain the credibility of professional media producers, and despite the fundamental changes on the media landscape in the last two decades, audiences still express a need to be informed by professional journalists and media organisations (GOYANES–DEMETER 2020).

Table 1: A summary of different journalistic norms and roles

Journalistic norms and roles	Implications for fact checking and fake news
Fight against misinformation	Recognising fake news, false information and propaganda
Prevent potential danger	Controlling potentially dangerous news content
Considering the appropriate level of gatekeeping	State secret, military secret, legal and moral considerations
Independence of politics	Not to be partisan
Independence of economics	Not to be advertisers of any business
Responsibility	Work for the benefit of the whole society
Professionality	Undergo specific training and education
Institutionalism	Professional associations and organisations, ethical committees
Accountability	Misconduct and fraud can be sanctioned
Neutrality	To be impartial when constructing news content and to acquire information from all the related sources
Equality and equity	To represent every social subgroup, including minorities
Activism	To contribute to the development of some social good

Source: Goyanes–Demeter 2020

Troll factories, bots and fake news

One of the most important questions to answer when establishing whether or not one has encountered fake news can be traced back to the rhetorical one raised in Seneca's play Medea, commonly referred to as *cui prodest,* that is, who benefits from the given piece of news. One methodological difficulty of any attempt to eliminate fake news is that it requires adequate certainty to establish that the published information is disinformation.

Social media sites are often accused of failing to efficiently stand up against the dissemination of fake news by detecting and blocking such news with effective algorithms. It is clear, however, that such algorithms would have already been developed if there actually were parameters based on which one could establish whether a communication counts as fake news or a biased opinion (the latter makes the challenge even more difficult, given that its identification during electoral campaigns widely varies by the tolerance thresholds of individual countries). For this reason, social media sites employ so-called fact-checking procedures, in which a third-party organisation examines the content of the news piece in question, labels the posts referring to the news as disinformation or

fact, and blocks the contents if necessary. This solution raises several problems, however, since if a user's general attitude is based on their firm belief in a global conspiracy theory, the fact that the disseminated contents have been labelled as fake news will be integrated in their worldview as an attempt at silencing the truth, and, as a consequence, they will continue to ignore all factual evidence proving that the shared news piece contains misinformation.

Another problem with fact-checking is that some news pieces may introduce new information that has formative impact on the common knowledge of the subject, whereas the algorithm continues to label the disseminated information as fake news, thereby impairing users' trust in fact-checking, while also hindering the natural flow of discourse on the subject aimed at processing the new knowledge. These difficulties are well exemplified by the recent fake news about the Wuhan Institute of Virology in China, which is based on the tenet that the coronavirus actually is a biological weapon, over which the laboratory lost control by accident or by deliberate human intervention. In this particular case, the intriguing evolutionary process of how the radical conspiracy theory has been absorbed by mainstream media is also worth observing, to which Drew Holden called attention by giving a detailed analysis of top headlines of popular news websites on Twitter on 25 May 2021 (see Figure 1; HOLDEN 2021).

Figure 1: Twitter thread
Source: HOLDEN 2021

These developments eventually led 18 noted scientists to publish an open letter in the prestigious *Science Magazine* in May 2021, urging all concerned parties to seriously consider the theory of the lab-escaped virus as part of the investigation on the origin of the coronavirus (BLOOM et al. 2021). That is not to say that the authors of the letter endorse the the-

ory; they only point out that a comprehensive investigation requires the examination of this alternative, among others. The relevance of the message is obvious: disproving the theory by means of an adequate methodology is a scientific achievement just as notable as proving it.

The above considerations clearly show that the biggest challenge in fake news elimination is posed to users' digital immunity; it is left to the individual user to critically evaluate the downloaded contents and judge whether or not they are fake news. The problem is that fake news disseminators continuously adapt and take advantage of the latest technological innovations in order to bring their disinformation campaigns to fruition. Therefore, it is vital to learn about the processes contributing to the spread of disinformation.

As mentioned above, the first issue to resolve is identifying the party who is interested in disseminating the claims shared online. Certain fake news clearly serves to gain financial profits, not only including pay per click ads,[1] but pseudo-scientific news is often disseminated by distributors of healthcare products who offer panaceas of at least questionable effectiveness such as vitamin C for oncological diseases or coronavirus symptoms.

In many cases, however, fake news campaigns are specifically targeted at influencing political decision-making processes. Such activities are classified in the literature as psychological operations (henceforward referred to as PSYOPs; see NARULA 2004), which may be described very concisely as the conflicting parties' mutual attempts at influencing the selected target groups by cognitive means.[2] Besides the conflicting party, a target group may also be the population of the agent's own country, the agent's allies, and practically all political campaigns may be considered PSYOPs (MILLER 2015). PSYOPs are commonly equated with propaganda, but this latter term has a strong negative ideological connotation due to the former Nazi and Soviet propaganda factories, thus the literature prefers the term 'targeted communication'.

A fundamental distinction is made between the three categories of white, black and grey propaganda. White propaganda includes cases when the communicator is publicly known, and the messages are based on facts, whereas the communicators of black and grey propaganda are unknown and often disguised, and their messages serve to disseminate disinformation. The repertoire of PSYOPs includes reflexive control,[3] the so-called social virus,[4] and the entire range of special instruments and techniques[5] (TILL 2020).

An important distinction should be made between misinformation and disinformation, the former of which means unintended generation or dissemination of false information, while the latter is aimed at causing harm by spreading fake news (STAHL 2006). The underlying motives of misinformation include common human factors such

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[1]   In such cases, the amount of profit gained from advertisement is based on the number of page downloads.
[2]   The activity is as old as humanity itself. The earliest written description of the principle is documented in *The Art of War* by Sun Tzu, noting that "the supreme art of war is to subdue the enemy without fighting" (TZU 2006), while now it is often understood in the context of hybrid warfare (HOFFMAN 2007).
[3]   It is aimed at influencing the decision-making processes of the leader of the enemy forces.
[4]   The impact is essentially achieved through influencers' activity.
[5]   E.g. using artificial intelligence, in which the so-called DeepFake technology has crucial importance.

as making an impression on friends by appearing well-informed on the latest developments such as the decease of a celebrity, the news of whose departure one strives to be the first to share, maybe for the seventh time. Another important motive is financial profit, as is the case with pay per click ads. By contrast, disinformation is often implemented by means of PSYOPs run by national security agencies of foreign states, as it was probably the case with the 2016 U.S. national election or the Brexit campaign (ZIEGLER 2018).

Since the 2016 U.S. national election, Russia has been regularly accused of misusing cyberspace, and particularly social media, to manipulate decision-making in internal affairs of foreign states, primarily by means of spreading fake news. These developments have essentially contributed to the recent accumulation of related literature (for details see e.g. FIGUEIRA–OLIVEIRA 2017; JANG–KIM 2018). Russia's intensive deployment of PSYOPs can be traced back to the 2014 Ukrainian crisis, but the country has been active in the field since the 2008 Russo–Georgian war.

The dissemination of disinformation is facilitated by several factors. First, one encounters an immense amount of information on the Internet, which is an enormous challenge, since one usually has neither time nor capacity to sort out facts and fake news in the overwhelming flood of information. Moreover, social media have changed the general trends in news consumption: a large part of people consider social networking sites the primary source of news. As a consequence, these people's orientation is heavily influenced by AI-based secret algorithms selecting news for individual users. Importantly, social media sites use thousands of parameters to analyse each user's preferences and select the contents to be displayed in the news stream accordingly.

In the absence of pluralistic consumption habits, this automated selection process adjusted to the user's behaviour may result in the development of a so-called filter bubble, that is, the user will only find those contents at media sites that they regularly consume, whereas they will encounter few or no contradicting contents, however widespread they may be. As a consequence, such a filter bubble leaves the user with the impression that their narrowed perspective on reality is objective, encompassing reality as it is.

A closely related concept is the recently expanding post-truth phenomenon, which contributes to the impact of fake news on political decision-making (LEWANDOWSKY et al. 2017). The term post-truth refers to a state of affairs when public opinion is driven by emotions and beliefs rooted in personal convictions rather than based on facts. In this state, objectivity gradually loses its importance in reality perception, replaced by a multitude of parallel subjective realities. This process contributes not only to the absorption of fake news but also to confusion deliberately generated by the dissemination of alternative information questioning the validity of mainstream news releases. This latter activity is referred to as *noise making,* which is aimed at undermining public trust in the institutions of democracy, thus impairing the perceived legitimacy of the incumbent government. Noise making is commonly used by the national security agencies of authoritarian states, particularly against the Member States of the European Union, since fragmenting the EU hinders the Member States from standing up in unity as a global political actor, which leaves more scope to the political ambitions of the noise making states. Sinal Aral and colleagues (VOSOUGHI et al. 2018) found that fake news, and particularly fake political

news, spreads more rapidly, reaches a wider audience, and undergoes deeper absorption in all observed information categories, in some cases significantly exceeding the dissemination of valid news. It is also worth noting that people spread fake news faster than botnets.

Botnets are algorithms that create various fake profiles at social media sites, through which they disseminate contents. Different botnets may considerably vary by their level of technological development. A call for proposals of the U.S. Air Force for the development of an "online identity management software" gained wide publicity in 2011 (WEBSTER 2011). The software would have been a botnet designed to influence political decision-making processes by means of fake profiles created at social media sites. As a matter of course, the software would have had to meet special criteria such as ability to evade geolocation, since, in case of a military operation targeted at, say, the Middle East, it might have had regrettable consequences if a successful geolocation of the fake profiles had pointed to the U.S. Air Force Academy, Colorado Springs, Colorado. In addition to a VPN, the fake profiles were supposed to have a history tailored to the targeted area. Such botnets have presumably been developed by several states over the past years, for which Twitter is a particularly popular host (ABOKHODAIR et al. 2015). Besides botnets, several states employ so-called troll armies. One of the most widely known troll armies is based in Russia. According to former members' reports, these armies run their operations under strictly regulated conditions (WALKER 2015). For example, the Saint Petersburg-based Internet Research Agency engaged in online research employed an estimated one thousand shift workers[6] in groups of three,[7] paid at a special pay grade,[8] to share anti-Western and pro-Kremlin news at domestic and foreign news websites.[9] The topics which are most frequently related to the latest developments in foreign and home affairs are assigned at the beginning of each day, and a specific number of comments[10] has to be posted with a specific number of fake profiles. Of course, Russia is not the only country that deploys troll armies. China operates groups comprising millions of workers (Yang 2017), and there presumably are Western countries that have also developed similar forces.

Conclusions

The technological advancements leading to internet-based communication have caused major changes in society which need further research as well as legal regulation. In lack

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[6]   Approximately 20 workers were supervised by 3 editors in each room.
[7]   One of them functioned as a blogger posting news on the current topics, who was later joined by the commenters generating discussion and confirming the news.
[8]   In 2015, the basic monthly salary amounted to 45,000 Russian rubles, and those commenting in English received 65,000 rubles per month.
[9]   The most frequently recurring theme is the Western or European civilisation being driven into perdition due to decadence, liberalism, and, more recently, migration and weak leaders.
[10]   A total of 135 comments during a 12-hour shift.

of full understanding of these changes, we face challenges in the area of interpersonal, social and international communication. Interpersonal communication is impacted because each internet user is exposed to more information than ever before. Its processing is made difficult by the fluid, ever transforming context created in the online environment. This hinders the recognition of those traditional factors of our communication models which could serve as clues to the interpretation of messages (for instance, the identification of the source). Consequently, internet users are more exposed to influence, even adverse influence.

Journalism, which has been a basic component and tool of social communication, is also affected by technological disruptions because boundaries between professional journalism and user produced content as well as between genres and styles are becoming obscure. This may result in declining standards of journalism, which, in turn, undermines trust in professional news reporting and analysis. The irresponsible dissemination of unchecked information by individuals sparks strong emotional response and heated debates, which often replace democratic deliberation. Relying on this method, insurgent groups, criminals or adverse powers may destabilise democratic institutions.

In the area of international relations, the internet and social media have become a domain of 'information war' where state and non-state actors openly or covertly exploit the persuasive toolbox of modern technology, spreading fake news (such as an invented story disguised as a news item) or texts in manipulative language (such as a troll's comment or a post written by order, for payment). The internet users may additionally be misled by a falsified context resulting from an algorithm- or robot-generated distribution and 'support' of deceptive content.

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