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Psychological mechanisms of disinformation and their impact on social polarization[1]

Abstract: This article examines the complex relationship between disinformation activities and the rise of social polarization. The study identifies the main psychological mechanisms through which disinformation exerts its impact and explores their connection to factors shaping polarizing social attitudes. The article conceptualizes the key disinformation factors that contribute to social polarization. By integrating research perspectives from social psychology and social research on communication, polarization, and disinformation, cognitive mechanisms are applied to the field of security sciences.

Key words: disinformation, information security, international security, social polarization

Introduction

The modern world is grappling with the issue of social polarization, a problem that is increasingly fueled by disinformation spread through social media and other communication platforms. Several psychological mechanisms contribute to polarization and increase the effectiveness of disinformation campaigns. The rise of new forms of communication exacerbates psychological vulnerabilities, creating fertile ground for disinformation. As a result, cognitive abilities and critical thinking skills are diminishing, while attitudes that favor clear, black and white divisions are on the rise. People become cognitively biased, ignoring op-

posing arguments and remembering only information that confirms their pre-existing beliefs. Disinformation also fosters a strong fear of different viewpoints, attitudes, or opinions, further entrenching division. Psychological mechanisms involved in the disinformation process play a role in deepening social polarization.

Therefore, the purpose of this article is to study and identify the psychological mechanisms of disinformation that contribute to the increase in social polarization. In line with this objective, the research problem discussed in the article boils down to the following question: What are the psychological mechanisms of disinformation that lead to an increase in social polarization? The problem will be addressed by answering some further questions, such as: What are the main psychological mechanisms of disinformation identified in modern disinformation research? What is the relationship between disinformation and social polarization? How are psychological mechanisms of disinformation utilized and orchestrated in efforts aimed at increasing social polarization?

This study aims to provide valuable insights into the psychological mechanisms through which disinformation influences social polarization. The findings offer a methodological foundation for further empirical research and can also help in the development of effective strategies to counter disinformation and foster social dialogue.

This article contributes to the study of disinformation and social polarization by integrating diverse research perspectives – including psychological research on disinformation, security research, and social research – to explain the mechanisms through which disinformation can exert its impact. The article proposes a new model of social polarization incorporating the role of disinformation. Moreover, authors plan to develop practical and methodological recommendations for further research on disinformation and social polarization.

Research methodology on disinformation and social polarization

The research methodology used in this article is based on an interdisciplinary approach, integrating different research perspectives from such areas as psychology, information security, and social sciences. The methodology involves a comparative analysis of research on the psychological mechanisms of disinformation, enabling to identify key factors affecting social polarization. The following methods are used in the study:

- comparative analysis of research on psychological mechanisms of disinformation to identify key factors influencing social polarization;
- content analysis encompassing existing studies and scientific literature (meta-analysis), which allows to gather relevant information on disinformation and social polarization;
- theoretical models applied for better understanding of the complexity of psychological mechanisms, disinformation, and its impact;
- inference from empirical studies to provide the basis for further exploration; and
- integration of perspectives from other fields, including psychology, information security, and social sciences through an interdisciplinary and holistic approach to the problem of disinformation and social polarization to enable critical analysis of existing theories and research findings.

The study was theoretical in nature, and the results provided a foundation for further empirical research. The methodology was specifically tailored to address the research objective and problem, allowing for the identification of priority mechanisms of disinformation. This approach facilitated a deeper understanding of the relationship between disinformation and social polarization, which can contribute to developing effective strategies to counter disinformation and encourage social dialogue.

Literature review

Disinformation exacerbates social polarization by leveraging various psychological mechanisms, leading to increased acceptance of disinformation, reinforcing prejudices and stereotypes, and eroding trust in institutions and authorities. A comparative analysis of research on psychological mechanisms and disinformation is based on a number of articles, such as Pennycook and Rand (2021), Greene and Murphy (2021), Escola-Gascon et al. (2023), Adeeb and Mirhosein (2023), Karami et al. (2021), Lewandowsky et al. (2012), and Ecker et al. (2022). These studies identify various mechanisms through which disinformation affects individuals, such as the lack of careful reasoning, credibility effect, confirmation bias, echo chamber effect, resistance to correction, emotionality of the message, manipulation of emotions, social and emotional motivations, and the bandwagon effect. Researchers emphasize the important role psychological mechanisms play in shaping social polarization and the urgent

need for further empirical research to better understand these processes and develop strategies to counter disinformation effectively.

Psychological mechanisms of disinformation

Disinformation is a concept that has recently gained significantly in importance in communication processes. There are several different terms that refer to disinformation, including manipulation, fake news, and propaganda. These terms differ in their nuances, making definitional distinction a subject of separate consideration. For the purpose of this article and to meet research objective, disinformation is defined as the deliberate dissemination of false information intended to mislead the audience and manipulate their perception of reality. This broad definition allows for a comprehensive exploration of the issue. In the realm of psychological research, disinformation refers to the process by which individuals acquire certain information and incorporates it as a cognitive resource into their cognitive process without critically evaluating its truthfulness (Polczyk et al., 2012). This process may lead to the distorted perception of reality and affect social polarization through, for example, creating false beliefs and divisions between social groups (Wrzoszek, 2019).

The psychological aspects of disinformation mechanisms in the field of security science are essential for understanding how false information is spread and how it can be effectively countered. Analyzing these psychological factors provides insight into the methods of manipulation used in disinformation campaigns, which in turn help design strategies aimed at educating the public, raising awareness, and building public resilience against such threats (Szpitalak, Polczyk, 2017). In the context of security, studying the psychological mechanisms of disinformation helps identify vulnerabilities in the information transfer processes and pinpoint factors that make individuals more susceptible to manipulation.

Disinformation indeed poses significant threats to national security as a tool for hybrid warfare, public safety with false information about health risks, as well as undermines trust in public institutions, increases vulnerability to manipulation, and cybersecurity risks (Buczel et al., 2021). Therefore, new approaches and methods are needed to study disinformation, especially in the context of security.

The study of psychological mechanisms behind disinformation in the context of social polarization involves compiling relevant findings from

scientific literature to identify social divisions. At this stage, it is necessary to define psychological mechanisms and then extract their descriptions from selected publications and scientific studies for further research.

In this context, the psychological mechanisms of misinformation refer to the complex cognitive, social, and cultural processes that lead to the acceptance, dissemination, and perpetuation of false information (Buczel et al., 2021). These mechanisms, as social processes, involve interactions and communication between individuals, as well as between individuals and institutions.

To identify the psychological mechanisms behind disinformation, a comparative analysis was carried out, compiling categories of mechanisms identified in seven subjectively selected scientific studies directly related to this topic. Table 1 presents these psychological mechanisms of disinformation. The primary research problem was to obtain meaningful results extracted based on various definitions of these mechanisms. This tabular summary aims to extract the mechanisms identified in social research to further operationalize them for analytical purposes.

The comparative analysis collated the following articles:

1. G. Pennycook, D. G. Rand, *The Psychology of Fake News* (Pennycook, Rand, 2021);
2. C. M. Greene, G. Murphy, *Quantifying the Effects of Fake News on Behavior: Evidence From a Study of COVID-19 Misinformation* (Greene, Murphy, 2021);
3. A. Escola-Gascon, N. Dagnall, A. Denovan, K. Drinkwater, M. Diez-Bosch, *Who falls for fake news? Psychological and clinical profiling evidence of fake news consumers* (Escolà-Gascón et al., 2023);
4. A. R. Adeeb, M. Mirhosein, *The Impact of Affect on the Perception of Fake News on Social Media: A Systematic Review* (Adeeb, Mirhoseini, 2023);
5. M. Karami, T. H. Nazer, H. Liu, *Profiling fake news spreaders on social media through psychological and motivational factors* (Karami et al., 2021);
6. S. Lewandowsky, U. K. H. Ecker, C. M. Seifert, N. Schwarz, J. Cook, *Misinformation and its correction: continued influence and successful debiasing* (Lewandowsky et al., 2012);
7. U. K. H. Ecker, S. Lewandowsky, J. Cook, P. Schmid, L. K. Fazio, N. Brashier, P. Kendeou, U. K. H. Ecker, *The psychological drivers of misinformation belief and its resistance to correction* (Ecker et al., 2022).

Comparative analysis of studies on psychological mechanisms behind disinformation

Phenomenon	Description	Articles
1	2	3
Lack of caution in reasoning	No analysis of the content, no checking of the reliability of the information.	1, 2, 3
Credibility effect	Derive information from reliable sources or authorities, no criticism of sources.	1, 2, 3, 6
Use of authorities and institutions	Give credence to disinformation with public, institutional, scientific authority.	2, 3, 6
Perception of disinformation as fact	Building awareness and identity based on information that is not true as fact.	1, 3, 6
Cognitive errors	Incorrect inference and interpretation of information succumbing to manipulation due to cognitive limitations	1, 4, 7
Confirmation of your own beliefs	Seeking information to confirm beliefs or views.	1, 4, 5
Echo chamber effect	Surrounding oneself with information that confirms views, the formation of information bubbles.	1, 3, 5
Resistance to revisions	Maintaining misconceptions despite presentation and learning correct information or corrections.	1, 3, 6
Third person effect	Recognize that disinformation exists, but it is others who are susceptible to it.	2, 6, 7
Reversal effect	Deepening conviction and belief in falsehood under the influence of true information.	1, 6, 7
Effect of further influence	Difficulty in changing beliefs under the influence of real information.	2, 3, 6
Effect of illusory truth	Considering false information as true because it is repeated many times.	1, 4, 6
Information leverage effect	Difficulty in changing beliefs after believing misinformation.	2, 4, 6
Barnum Effect	Accepting general statements as accurate descriptions.	3, 5, 7
False and selective information	Narratives that conform to a general concept of truth, manipulated or selected facts.	1, 4, 5
Pseudoscientific beliefs	Beliefs that are seemingly based on scientific arguments, but in reality have no scientific support or research nor evidence.	1, 4, 6
Effect of influence control	Recognition, the tendency to overestimate one's ability to control situations or events, the ability to know the truth.	1, 4, 5
Emotionality of the message	Influencing the assessment of the credibility of information by evoking extreme emotions.	1, 2, 4
Manipulation of emotions	Reducing the rationality of the recipient's actions by deliberately evoking strong emotions.	1, 2, 4
Social and emotional motivations	The desire to attract attention, gain recognition, strengthen social relationships.	1, 2, 5

1	2	3
Social proof	*Argumentum ad populum*, is the logical fallacy of believing that something is true because it is widely accepted or popular in society.	2, 4, 7
Social impact	Following the approval and recognition of others (conformity, social pressure, social persuasion).	1, 3, 5
Bandwagon effect	The tendency of people to adopt certain beliefs, attitudes or behaviors because they see others doing so.	2, 4, 7
Improving relationships	Attracting attention, recognition, strengthening relationships in the group.	1, 2, 5
Confusion and uncertainty	Conflicting information, manipulation of facts, confusion, loss of trust in sources.	1, 2, 6
Creating confusion	Excess of information, infodemia, confusion of the audience, impediment to judgment.	1, 3, 6
Lack of control	Disinformation as a mechanism for dealing with uncertainty.	1, 3, 6

The above overview allows for some generalizations regarding the psychological mechanisms of disinformation. Based on the comparative analysis, several categories have been identified.

1. **Trust in sources and authorities**.

   In this category, it is possible to distinguish mechanisms that lead to trusting disinformation due to the perceived credibility of the source. These mechanisms are:

   a) Lack of caution in reasoning (lack of content analysis, verification of the reliability of sources, criticism);

   b) Credibility effect (the origin of disinformation from sources considered credible, authorities, opinion leaders, public or cultural institutions);

   c) Perception of disinformation as fact.

2. **Cognitive** distortion – the category focuses on psychological mechanisms that lead to distortion of information perception and interpretation of reality in a manner consistent with existing beliefs.

   a) Confirmation of one's own beliefs (seeking information that confirms the recipient's views, orientation toward confirmation of extreme opinions, acceptance of information that is consistent with beliefs);

   b) Information isolation and polarization (isolating oneself from information that contradicts one's own beliefs and reinforcing polarization of views);

   c) Omitting information deemed incompatible with one's worldview.

3. **Resistance to change and denial** – the category focuses on the psychological mechanisms that lead to resistance to change of views and denial of disinformation, includes:
   a) Discrepancy between belief in information and awareness of its uncertainty;
   b) Lack of awareness of disinformation;
   c) Effects: third person, retreat and further influence.
4. **Perpetuation of misinformation** – refers to mechanisms that reinforce belief, conviction in false information, such as:
   a) Illusory truth effect, information leverage effect, Barnum effect, influence control effect;
   b) Information and narrative selection;
   c) Pseudoscientific beliefs.
5. **Emotional influence** – focuses on emotions as psychological mechanisms that lead to greater susceptibility to misinformation:
   a) Emotional presentation of information;
   b) Emotionality of the message (extreme emotions, manipulation of emotions, deliberate evocation of strong emotions, attracting attention, gaining recognition, reinforcing the message);
   c) Acceptance of inaccurate content;
   d) Lowering the threshold for individual assessment of the reliability of information.
6. **Conformism and social pressure** – verifies group social relations, networks and social behavior due to adaptive processes through:
   a) Social proof;
   b) Strive for acceptance and recognition;
   c) Bandwagon effect – adopting the attitudes and opinions of others, recognizing that others do the same;
   d) Relationality of acceptance of disinformation – attracting attention, recognition in the group, strengthening relationships, distribution.
7. **Uncertainty management** – by dispersing actions and narratives (infodemia) suggesting and indicating danger, reinforcing uncertainty, building an atmosphere of anxiety:
   a) Confusion – conflicting information, manipulation of facts;
   b) Reducing the credibility of public information sources;
   c) Infodemia – an excess of information, giving contradictory information;
   d) Recognize disinformation as a way to act anomie.

Understanding the psychological mechanisms behind the impact of disinformation is crucial for addressing social polarization. The summary does not yet directly analyze polarization. However, the matrix provided outlines the identified impact mechanisms. In the next stage of the study, it will be necessary to select and rank these mechanisms based on their contribution to social polarization.

There is no doubt that disinformation exacerbates social polarization, largely due to the psychological mechanisms it exploits (Linden et al., 2021). The insights from psychology are more relevant in this context than those from security sciences, as they use different methodologies. Psychology provides a deeper understanding of the underlying psychological mechanisms driving disinformation and social polarization. Psychology helps to understand the mechanisms related to thinking motivation, emotions, psychological effects (errors, biases), and the analysis of social interactions, particularly in response to information stimuli from the environment. This understanding offers tools to counter and reduce the impact of disinformation and mitigate social polarization.

When considering the mechanisms of disinformation affecting social polarization, it is important to focus on motivational mechanisms. These mechanisms fulfill the need to maintain cognitive coherence, positive well-being, social belonging, reduce uncertainty, and conserve cognitive resources (Szpitalak, 2012). They are particularly relevant to social polarization as they shape beliefs, attitudes toward oneself and others, leading to the reinforcement of divisions, intergroup conflicts. They also increase acceptance of and demand for disinformation that confirms preexisting beliefs, strengthens misconceptions, fosters feelings of positive well-being and social belonging, confirmations one's value within a group, heightens chauvinistic sentiments, deepens social divisions, and reinforces prejudices (Szpitalak, 2012).

Social polarization and international security

Social polarization is a process in which society is divided into extreme and opposing groups, often based on views, values, beliefs, or preferences. This division can lead to increased conflicts and disagreements, making dialogue and cooperation between different social groups more difficult. Social polarization can be driven by various factors, such as differences in worldview, politics, or socioeconomic sta-

tus. In extreme cases, it can lead to social and political destabilization (Konopka, 2022).

Social polarization in the context of disinformation refers to a process where false information, spread intentionally or unintentionally, exacerbates divisions in views and social beliefs. Disinformation can foster the creation or deepening of differences between social groups, reinforcing conflicts and making it more difficult to reach a consensus or common understanding. It is noted that disinformation and social polarization are closely correlated phenomena often leading to information isolation, increased tensions, and a breakdown in dialogue between different social groups (Azzimonti, Fernandes, 2021).

Social polarization can be identified and studied through several aspects, including:

a) worldview divisions and differences in values, beliefs, or ideologies between social groups;
b) political divisions resulting from different political preferences, support for parties or politicians;
c) economic divisions manifested as inequality of income and living conditions; and
d) cultural divisions, or differences in customs, traditions, language, etc. (Kolczyński, Norstrom, 2022).

Increased polarization is primarily driven by the media, disinformation, and decline of social dialogue or empathy. The magnitude of social polarization is important for state sovereignty and security, as it directly affects political, social, and economic cohesion and stability. It is therefore important not only to monitor polarization itself but also the factors that influence it, and to implement measures to mitigate existing divisions (Kolczyński, Norstrom, 2022).

Social polarization is an important factor in national security. Its intensity influences internal conflicts, social integration or disintegration, acceptance of political decisions, and perceptions of state institutions. High levels of social polarization foster internal tensions, which can be exploited internationally or have broader international implications (Vasist et al., 2023).

Social polarization has a direct bearing on international security. One contributing factor is a geopolitical code, which antagonizes a society or a nation against others (Lewandowski, 2020). Geopolitical codes influence polarization, especially by shaping narratives, national identity, and public opinion. They serve as propaganda tools that determine public

perception of international relations through emotional appeals, public sentiments, and attitudes (Lewandowski, 2020).

Growing social polarization has also other impacts on international security, such as making cooperation more difficult, hindering consensus-making, and threatening the quality of democracy (Azzimonti, Fernandes, 2021). Increased vulnerability to external information sources, global media, and the Internet presents new challenges for international and information security in addressing the impacts of rising polarization. On the one hand, intercultural dialogue may seem easier due to open borders and transnationalism, while on the other hand, conflicts, media bubble isolation, and polarization are increasing (Said-Hung et al., 2023). Additional factors include the rise in international conflicts and tensions, the growth of extremism, terrorism, and nationalism, and the decline in international trust (Bjornsgaard, Dukić, 2023).

These conditionalities create complex relationships where disinformation significantly influences social polarization through information manipulation, false narratives, and the use of geopolitical codes. As a result, it deepens existing social divisions, reinforces conflicts, and weakens trust in groups and institutions. Social polarization directly affects national and international security. Although disinformation is often marginalized as a hybrid activity, it has a direct impact on state and regional security. This has been demonstrated in several studies. Specific security areas vulnerable to disinformation and polarization include political, social, economic, and information sectors (Domalewska, 2021). Since polarization directly affects various aspects of state security, it also shapes the security of entire regions.

The strengthening of disinformation and polarization in democratic states is a particularly dangerous trend, affecting social, political, or media pluralism. Democracies become particularly vulnerable to hybrid activities. As a result, they risk of becoming hostages to the very values they uphold, such as freedom of speech and media. In discussions about the crisis of democracy, many symptoms of the crisis are closely tied to polarization. Key concerns include political instability, inability to reach social and political consensus, and the lack of compromise and negotiation. This paralyses political processes within government institutions. The slow erosion of democracy under the influence of social polarization manifests itself through the violation of democratic norms, destruction of its standards, and the restriction of civil liberties. Intergroup tensions are rising, and public discourse is increasingly framed in terms of "us vs.

them" or "friend vs. foe" divisions. This contributes to the emergence of categorization, stigmatization, and reliance on stereotypes. These, and many other aspects of the crisis of democracy, are exacerbated by disinformation and social polarization (McCoy et al., 2018).

Psychological mechanisms of disinformation and their role in social polarization

While analyzing the impact of disinformation on social polarization, various authors point to the following primary factors:
a) information manipulation – deliberate distortion or concealment of information in order to influence public opinions and views;
b) manipulating emotions;
c) conflicts between various groups over views, values, and ideas;
d) inequality – significant differences in access to material goods, education, power, etc. among different social groups;
e) extremism – adherence to radical views and attitudes, often combined with the pursuit of conflicting goals while resorting to violence or undemocratic methods;
f) lack of trust in public institutions (e.g., government, parliament) and the media;
g) political propaganda and the formation of desirable attitudes;
h) lack of dialogue, communication, and the exchange of views between different social groups;
i) discrimination and exclusion based on race, gender, religion, sexual orientation, etc. (Alvarez-Galvez et al., 2023; Azzimonti, Fernandes, 2021).

This list helps to identify that some psychological mechanisms are more specifically aligned with disinformation than others. The analysis of data available reveals strong correlations between categories of susceptibility to disinformation and factors that contribute to increasing social polarization.

This section of the article presents a deductive analysis, formulating general conclusions based on theoretical premises and the juxtaposition of research findings. It compares identified categories of susceptibility to disinformation with factors that promote social polarization, incorporating insights from scientific literature and social research. Additionally, this section suggests the potential usefulness of identified psychological

impact mechanisms in studying social polarization. Accordingly, the following section presents relationships between categories and factors, as well as a proposed valorization scale for conceptual and theoretical observation of the phenomenon, which requires operationalization for the use in further social and narrative research.

Referring to the previously identified categories, conformism can be seen as an enabler of disinformation and social polarization (Colliander, 2019). Conformism the tendency to adapt one's behavior, views, and opinions to the norms and expectations of the group one belongs to, plays a significant role in the context of disinformation and social polarization. It can lead to several negative outcomes, including acceptance of disinformation to align with others or loved ones, the desire to avoid exclusion, and the need to belong to a group adhering to specific, strong beliefs. Conformism may also result in the adoption of popular and common beliefs in public discourse as one's own, reduced critical thinking towards information sources, the formation of unreflective attitudes, and decreased willingness to question information. This can cause individuals to repeat falsehoods within their groups, reinforcing disinformation, and contributing to the creation of information bubbles.

Cognitive distortion drives social polarization by reinforcing one's beliefs (Guess, Andrew, Nyhan, Bernard, Reifler, 2018). This manifests as seeking out information that confirms pre-existing beliefs, rejecting information that contradicts expectations, shutting down dissenting opinions, isolating oneself, polarizing viewpoints, and radicalizing beliefs (Ackland, Gwynn, 2021). Uncertainty management, as an enabler of polarization, operates by creating confusion and infodemia, presenting contradictory information, fostering uncertainty, anomie, and confusion. This strategy aims to undermine the credibility of information sources, leading to focus on false information as way to explain reality, thus creating fear and reinforcing extreme behaviors (Dolores Albarracín, 2021).

Resistance to change and denial reinforce social polarization through the disconnect between belief in information and belief in its truth. Awareness that information may not be accurate does not prevent individuals from believing in or spreading it (Oyserman, Dawson, 2021). False information serves to reinforce existing beliefs and strengthen group identity (Schwarz, Jalber, 2021). This behavior limits self-reflection on one's own views, promotes tolerance of misinformation, and leads to the questioning of others' beliefs, ultimately fostering criticism and conflict.

The perpetuation of misinformation as an enabler of polarization manifests itself through the illusory truth effect – where the mere repetition of information in discourse leads to its perceived truthfulness. This results in the perpetuation of false information in public consciousness, its incorporation into individual identity, resistance to dissenting opinions, and the creation of personal narratives (Lazer et al., 2018).

The emotional impact and presentation of information as a driver of social polarization is evident through the use of catchy, easily remembered, and extreme content that appeals to strong emotions (Schwarz, Jalber, 2021). This also leads to the acceptance of inaccurate information that contradicts logic, shifting blame and responsibility to those who hold different views or are critical of the sources.

This observation ties into the role of trust in sources and authorities as a factor influencing social polarization. The aims is to gradually erode credibility and trust in the media and public institutions as reliable sources of information (Guess, Andrew, Nyhan, Bernard, Reifler, 2018). As a result, social groups that trust the media and public institutions stand in opposition to those seeking alternative information. This situation also arises the risk of individuals isolating themselves within media outlets that align with a particular political stance.

The deductive analysis above suggests a correlation between categories of psychological disinformation influence and susceptibility to social polarization. It should be noted that these correlations are complex and may vary depending on the social and cultural context. Additionally, there are numerous other factors that can contribute to social polarization, with disinformation being only one of them.

To fulfill the purpose of the study, the analysis, selection, comparison, and collation of data was carried out to assess the usefulness of psychological mechanisms related to disinformation that foster social polarization. The following section assigns specific values to specific categories and factors (Sztabiński, 2011). The ranking of values involves prioritizing elements based on specific criteria. While providing the ranking and valuation the psychological mechanisms, three distinctions were made:

a) priority categories were identified to be directly related to motivational mechanisms of disinformation, which translate into social relations and group behavior followed by individuals exposed to disinformation. These include conformism, social pressure, and cognitive distortion;

b) secondary categories were identified as those indirectly related to the motivational mechanisms of disinformation, significantly affecting

how individuals perceive themselves and others within a group. These include uncertainty management, resistance to change and denial, and the perpetuation of disinformation;

c) tertiary categories were identified as those that do not directly affect the perception of individuals or self within a group but influence susceptibility to disinformation. These include emotional affect and trust in sources and authorities.

The methodological summary above allows for ranking individual mechanisms of disinformation and narratives based on the strength of their impact on social polarization. This helps determine which mechanisms are present and to what extent, for example, in the context of Russian disinformation in Poland. Priority mechanisms are assigned the value of 3, secondary 2, and tertiary categories the value of 1.

The methodological approach allows for assessing the strength and intensity disinformation impact. If the analysis of disinformation demonstrates a strong presence of priority mechanisms, one can conclude that disinformation have significant polarizing potential. This framework also helps identify key disinformation mechanisms. Furthermore, this approach fosters strategies to counter disinformation by considering specific characteristics, purpose, and mechanisms behind its polarizing effect (Allcott, Gentzkow, 2017).

Critically addressing the results, it is important to note that this analysis is theoretical and based on existing research findings and literature. It does not include empirical research, but rather serves as a foundation for future studies on disinformation and its impact on social polarization. The proposed model is highly simplified and does not take into account all possible factors, focusing only on those most frequently discussed in the scientific literature. Therefore, the conclusions drawn are preliminary and meant to serve as suggestions for further empirical research.

A practical dimension of the above study and analyses is expressed by the model of social polarization with regard to disinformation:

$$Pp = f(D,C,S)$$

where: Pp – level of social polarization as a function (f) of the dependence on disinformation (D), individual characteristics of the recipient influenced by psychological mechanisms of disinformation (C), and factors applicable to social polarization (S).

The above analysis identifies a range of variables behind mechanisms and factors, such as the level of polarization, direction of polarization, type

of disinformation, distribution channels, level of reception, trust in media, and trust in public institutions. Analyzing these variables through the social polarization model can provide valuable insights into disinformation mechanisms driving increased polarization. This information can be instrumental in developing strategies to counter polarization and promote social dialogue.

It is also important to highlight that existing mechanisms to combat disinformation remain largely ineffective. Methods such as fact-checking, inoculation, identity management, prebunking (Ecker et al., 2022), debunking, or nudging (Ziemer, Rothmund) have not yielded spectacular results in the fight against disinformation. This underscores the need for further research into the effectiveness of strategies and actions to counter the spread of disinformation and reduce social polarization.

Conclusions

Today, access to information is cheaper and easier than ever before. However, this also led to a growing problem of disinformation, which significantly impacts our societies. It undermines trust in institutions, traps people in "information bubbles" where they are confronted only with views consistent with their own, and contributes to social polarization. Social media algorithms and the polarization of language amplify this effect, making it increasingly difficult to encounter differing perspectives.

This article clearly confirms the importance and role of disinformation in shaping social polarization and international security. Disinformation deepens social polarization through psychological mechanisms while at the same time increases the acceptance of disinformation activities. It reinforces existing prejudices and stereotypes, leading to deeper societal divisions. Psychological mechanisms such as availability heuristics and the confirmation bias make people more vulnerable to disinformation. This, in turn, erodes trust in institutions and authorities, promoting social polarization. Disinformation undermines social capital and hinders efforts to build consensus.

The research identified the main categories of psychological mechanisms behind misinformation. These include distrust to sources and authorities, cognitive distortion, resistance to change and denial, perpetuation of misinformation, emotional affect, conformity and social pressure, and uncertainty management. These mechanisms reinforce factors contributing to social polarization, with varying degrees and intensity. This highlights the need for further empirical research.

The analysis indicates an increase in disinformation activities in democratic states, accompanied by increasing social polarization. While the exact level of correlation between these phenomena requires further research, there is no doubt that the connection exists. Disinformation, through social polarization, exacerbates the crisis of democracy, affects its quality, and impacts national and international security.

Conclusions drawn from this work for international security suggest that the psychological mechanisms of disinformation driving social polarization can erode trust in national and international security institutions, impede cooperation in addressing transnational issues, strengthen nationalism and extremism, and obstruct dialogue and negotiations between nations. Certainly, disinformation is, and will continue to be, used to manipulate public opinion to destabilize states and interfere in their internal affairs. Ultimately, disinformation and social polarization represent a significant challenge to international security.

Bibliography

Ackland R., Gwynn K. (2021), *Truth and the dynamics of news diffusion on Twitter*, in: *The Psychology of Fake News; Accepting, Sharing, and Correcting Misinformation*, eds. R. Greifeneder, M. E. Jaffé, E. J. Newman, N. Schwarz, Routledge, New York.

Adeeb A. R., Mirhoseini M. (2023), *The Impact of Affect on the Perception of Fake News on Social Media: A Systematic Review*, "Social Sciences" 12(12), p. 674, DOI: 10.3390/socsci12120674.

Allcott H., Gentzkow M. (2017), *Social Media and Fake News in the 2016 Election*, "Journal of Economic Perspectives" 31(2), pp. 211–236, DOI: 10.1257/jep.31.2.211.

Alvarez-Galvez J., Cruz F. L., Troyano J. A. (2023), *Discovery and characterisation of socially polarised communities on social media*, "Scientific reports" 13(1), s. 15439, DOI: 10.1038/s41598-023-42592-2.

Azzimonti M., Fernandes M. (2021), *Social Media Networks, Fake News, and Polarization*, "NBER Working Paper" (24462).

Bjornsgaard K., Dukić S. (2023), *The media and polarisation in Europe: strategies for local practitioners to address problematic peporting*, European Commission, Luxembourg.

Buczel M., Siwiak A., Szpitalak M. (2021), *Efekt przedłużonego wpływu dezinformacji. Teorie, metody badania i wyznaczniki wielkości*, „Polskie Forum Psychologiczne" (4), DOI: 10.34767/PFP.2021.04.02.

Colliander J. (2019), *"This is fake news": Investigating the role of conformity to other users' views when commenting on and spreading disinformation in social media*, "Computer in Human Behavior" (97).

Dolores Albarracín (2021), *Conspiracy beliefs: Knowledge, ego defense, and social integration in the processing of fake news*, in: *The Psychology of Fake News; Accepting, Sharing, and Correcting Misinformation*, eds. R. Greifeneder, M. E. Jaffé, E. J. Newman, N. Schwarz, Routledge, New York.

Domalewska D. (2021), *Disinformation and polarization in the online debate during the 2020 presidential election in Poland*, "Safety & Defense" (1).

Ecker U. K. H., Lewandowsky S., Cook J., Schmid P., Fazio L. K., Brashier N. et al. (2022), *The psychological drivers of misinformation belief and its resistance to correction*, "Nat Rev Psychol" 1(1), pp. 13–29, DOI: 10.1038/s44159-021-00006-y.

Escolà-Gascón Á., Dagnall N., Denovan A., Drinkwater K., Diez-Bosch M. (2023), *Who falls for fake news? Psychological and clinical profiling evidence of fake news consumers*, "Personality and individual differences" 200, p. 111893, DOI: 10.1016/j.paid.2022.111893.

Greene C. M., Murphy G. (2021), *Quantifying the effects of fake news on behavior: Evidence from a study of COVID-19 misinformation*, "Journal of experimental psychology. Applied" 27(4), pp. 773–784, DOI: 10.1037/xap0000371.

Guess A., Nyhan B., Reifler J. (2018), *Selective Exposure to Misinformation: Evidence from the Consumption of Fake News during the 2016 U.S. Presidential Campaign*, European Research Council (Working Paper).

Karami M., Nazer T. H., Liu H. (2021), *Profiling Fake News Spreaders on Social Media through Psychological and Motivational Factors*, in: *Proceedings of*

the 32st ACM Conference on Hypertext and Social Media, eds. O. Conlan, E. Herder, HT '21: 32nd ACM Conference on Hypertext and Social Media. Virtual Event USA, 30.08.2021–02.09.2021, ACM, New York, NY, USA, pp. 225–230.

Kolczyński M., Norstrom R. (2022), *Polarized disinformation. The coverage of US presidential election by Polish TV*, "HP" 13(44), pp. 105–119, DOI: 10.35765/hp.2284.

Konopka K. (2022), *Pandemia dezinformacji – prawno-psychologiczny punkt widzenia wobec internetowych ruchów antyszczepionkowych i altmedowych*, in: *Dezinformacja – inspiracja – społeczeństwo*, eds. D. Boćkowski, E. Dąbrowska-Prokopowska, P. Goryń, K. Goryń, Białystok.

Lazer D. M. J., Baum M. A., Benkler Y., Berinsky A. J., Greenhill K. M., Menczer F. et al. (2018), *The science of fake news. Addressing fake news requires a multidisciplinary effort*, "Science" (359).

Lewandowski P. (2020), *Kod geopolityczny – koncepcja teoretyczna i metodologiczna*, „Politeja" 16(4(61)), pp. 297–315, DOI: 10.12797/Politeja.16.2019.61.17.

Lewandowsky S., Ecker U. K. H., Seifert C. M., Schwarz N., Cook J. (2012), *Misinformation and Its Correction: Continued Influence and Successful Debiasing*, "Psychological science in the public interest: a journal of the American Psychological Society" 13(3), pp. 106–131, DOI: 10.1177/1529100612451018.

Linden S., Roozenbeek J., Maertens R., Basol M., Kácha O., Rathje S., Traberg C. S. (2021), *How Can Psychological Science Help Counter the Spread of Fake News?*, "The Spanish journal of psychology" 24, e25, DOI: 10.1017/SJP.2021.23.

McCoy J., Rahman T., Somer M. (2018), *Polarization and the Global Crisis of Democracy: Common Patterns, Dynamics, and Pernicious Consequences for Democratic Polities*, "American Behavioral Scientist" 62(1), pp. 16–42, DOI: 10.1177/0002764218759576.

Oyserman D., Dawson A. (2021), *Your fake news, our facts: Identity-based motivation shapes what we believe, share, and accept*, in: *The Psychology of Fake News; Accepting, Sharing, and Correcting Misinformation*, eds. R. Greifeneder, M. E. Jaffé, E. J. Newman, N. Schwarz, Routledge, New York.

Pennycook G., Rand D. G. (2021), *The Psychology of Fake News*, "Trends in cognitive sciences" 25(5), pp. 388–402, DOI: 10.1016/j.tics.2021.02.007.

Polczyk R., Maciuszek J. Doliński D. (eds.) (2012), *Wokół wpływu społecznego*, WUJ, Kraków.

Said-Hung E., Merino-Arribas A., Martínez-Torres J. (2023), *Polarisation and Disinformation Content from Spanish Political Actors on Twitter/X*, "CT", pp. 104–120, DOI: 10.34135/communicationtoday.2023.Vol.14.No.2.8.

Schwarz N., Jalber M. (2021), *When (fake) news feels true: Intuitions of truth and the acceptance and correction of misinformation*, in: *The Psychology of Fake News; Accepting, Sharing, and Correcting Misinformation*, eds. R. Greifeneder, M. E. Jaffé, E. J. Newman, N. Schwarz, Routledge, New York.

Szpitalak M. (2012), *Motywacyjne mechanizmy efektu dezinformacji*, WUJ, Kraków.

Szpitalak M., Polczyk R. (2017), *Efekt dezinformacji z perspektywy psychologii społecznej: natura i uodparnianie*, „Psychologia Społeczna" (40).

Sztabiński F. (2011), *Ocena jakości danych w badaniach surveyowych*, IFIS PAN, Warsaw.

Vasist P. N., Chatterjee D., Krishnan S. (2023), *The Polarizing Impact of Political Disinformation and Hate Speech: A Cross-country Configural Narrative*, "Information systems frontiers : a journal of research and innovation", pp. 1–26, DOI: 10.1007/s10796-023-10390-w.

Wrzoszek M. (ed.) (2019), *Zjawisko dezinformacji w dobie rewolucji cyfrowej*, NASK, Warsaw.

Ziemer C.-T., Rothmund T., *Psychological Underpinnings of Disinformation Countermeasures: A Systematic Scoping*.

Psychologiczne mechanizmy oddziaływania dezinformacji na polaryzację społeczną

Streszczenie

Artykuł analizuje złożone relacje między działaniami dezinformacyjnymi a wzrostem polaryzacji społecznej. Badanie zakłada identyfikację głównych mechanizmów psychologicznego oddziaływania dezinformacji oraz ich odniesienie do czynników kształtujących polaryzacyjne postawy społeczne. Artykuł dokonuje konceptualizacji czynników dezinformacyjnych oddziałujących na polaryzację społeczną. Poprzez integrację perspektyw badawczych pochodzących z nurtu psychologii społecznej i badań społecznych nad komunikacją, polaryzacją i dezinformacją następuje przeniesienie operatów poznawczych na grunt nauk o bezpieczeństwie.

Słowa kluczowe: dezinformacja, bezpieczeństwo informacyjne, bezpieczeństwo międzynarodowe, polaryzacja społeczna