


## CONSPIRACY THEORIES GENERATED BY DIGITAL ANTI-VACCINATION COMMUNITIES. NETNOGRAPHIC CASE STUDY OF A FACEBOOK GROUP

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### ABSTRACT

The COVID-19 pandemic has contributed to the emergence of anti-vaccine groups and the dissemination of conspiracy theories on social media. These pseudoscientific conspiracy theories have led to the spread of xenophobic, racist, and potentially harmful information within society. This article aims to address a research gap by delving into the contextual factors that support the development of conspiracy theories. The aim of this article is to recognize the essence and activity of members of the digital community and to identify the contexts (cultural, economic, political, social, etc.) supporting the process of generating conspiracy theories using the example of a Facebook group. The methodological approach employed will be virtual ethnography (netnography), conducted through an exploratory case study of a selected Facebook group. The empirical data were taken from March 2020 to June 2022. To streamline the analysis, the research team extracted four keywords or concepts – “coronavirus”, “COVID-19”, “COVID”, and “SARS-CoV-2” – based on the frequency of their occurrence in the content. The research adopts an interdisciplinary perspective, drawing upon insights from media studies, social communication, sociology, and anthropology. The objective of this article is to present the current status of the project, which has received funding under the Strategic Program Excellence Initiative of Jagiellonian University.

**Keywords:** conspiracy theories, netnography, digital communities, COVID-19, social media

## *Introduction*

On March 11, 2020, the World Health Organization officially declared the coronavirus crisis as a pandemic (Noar, Austin 2020). It is undeniable that the pandemic has contributed to the proliferation of disinformation, both in the digital realm and beyond. Tedros Adhanom Ghebreyesus, the Director-General of the World Health Organization (WHO), aptly referred to this phenomenon as an infodemic, akin to an “information epidemic”. Similar to COVID-19, the infodemic undermines our ability to accurately perceive the world and discern truth from falsehood (Bieniek 2020, p. 9). Therefore, this article addresses the following issues: How do conspiracy theories act as catalysts for the formation of anti-vaccine communities during the COVID-19 pandemic? What cultural, economic, political, or social contexts support the generation of conspiracy theories? This study adopts a theoretical and methodological perspective grounded in interdisciplinary scholarship, encompassing sociology, media and social communication, and anthropology. By analyzing entries and comments from an anti-vaccine group on the Facebook platform, the researchers aim to provide new insights and previously unexplored observations on the conspiracy narratives of users during the SARS-CoV-2 pandemic in Poland. This article responds to the needs expressed by the Polish and international research community engaged in the study of digital humanities and rapidly evolving digital communities. By employing traditional anthropological tools within the digital realm, the researchers seek to offer fresh perspectives on conspiracy-related discourse during the COVID-19 pandemic in Poland.

The article addresses a significant gap in current academic discourse by focusing on the dynamics of conspiracy theory formation and the role of anti-vaccine communities in the digital space during the COVID-19 pandemic. While prior research has thoroughly examined the proliferation of misinformation and conspiracy theories (e.g., Douglas et al. 2019), there is still a limited understanding of how these phenomena intersect with the cultural and socio-political landscape specific to Poland, particularly within digital communities like those on Facebook. The integration of anthropological tools into the digital analysis offers a novel methodological contribution, responding to calls for more nuanced and localized examinations of misinformation (Donovan 2020). This research thus enriches the broader field of digital humanities by providing insights into the specific cultural and digital contexts in which conspiracy theories thrive. It directly addresses the need for interdisciplinary approaches that bridge traditional anthropological methods with the study of online environments, filling an important gap in both Polish and international studies of digital disinformation.

This article is timely and urgent because it not only responds to the ongoing COVID-19 crisis but also contributes to addressing the rapidly evolving challenges of disinformation and conspiracy theories that have become more pronounced during the pandemic. As the pandemic continues to pose global challenges, understanding the mechanisms of digital disinformation is crucial for both immediate public health responses and building societal resilience (Cinelli et al. 2020). The

study's focus on the Polish context adds a valuable local perspective to international discourse that has often focused on Western contexts (Van Prooijen, Douglas 2017). This article is part of a global research trend calling for immediate and sustained efforts to combat the infodemic, while providing detailed insights into the digital dynamics shaping conspiracy narratives in Poland.

### *Literature Review*

Conspiracy theories are not a new phenomenon, but their prevalence has been steadily increasing over the past two decades. Furthermore, their popularity has surged with the onset of the COVID-19 pandemic in 2020, posing a significant threat to public health on social media platforms. Numerous definitions of conspiracy theories can be found in the literature (Grzesiak-Feldman 2016; Kozik 2020; Guzowski 2016; Demczuk 2021), and it is crucial to clarify the concept within the context of this article. According to Sunstein and Vermeule, a theory can be classified as a conspiracy theory if it attributes an event or practice to a secretive plot orchestrated by influential individuals who seek to conceal their involvement, at least until their intentions are exposed (Sunstein, Vermeule 2009). Another definition suggests that conspiracy theories reflect a tendency to perceive significant social or political events as the result of conspiratorial actions, particularly during times of widespread uncertainty and crisis (Lee, Koo 2022). It is worth noting that conspiracy theories provide a means to make sense of unfamiliar and challenging situations. The popularity of social media and the rapidity of communication through instant messaging platforms have facilitated the rapid dissemination of conspiracy theories online. Consequently, they can become the primary source of information for many users (Jankowiak 2021). Lewandowsky and Cook also argue that conspiracy theories can serve as a rhetorical device to circumvent inconvenient conclusions (Lewandowsky, Cook 2020, p. 5).

During the coronavirus pandemic, conspiracy theories surrounding vaccination have emerged as a unifying force within communities opposing vaccination, commonly known as “anti-vaccine” groups. These groups predominantly utilize social media platforms such as Facebook as their primary means of communication. The proliferation of pseudoscientific conspiracy theories originating from these communities leads to the dissemination of information that can have xenophobic, racist, or other potentially harmful effects on society. Concurrently, social media platforms have acted as catalysts for the spread of disinformation and propaganda (Kouzy, Abi Jaoude 2020) while exacerbating the formation of virtual communities that undermine the achievements of modern medicine (Puri, Coomes, Haghbayan 2020). Some researchers argue that coordinated anti-vaccination groups, which generate and propagate conspiracy theories, play a significant role in fueling heightened emotions surrounding vaccinations. Their aim is to promote disinformation and sow divisions within society (Bean 2011; Broniatowski, Jamison 2018; Kata 2010). Existing literature on the topic suggests that studies analyzing

(digital) anti-vaccine groups in Poland typically provide a general overview of their activities on social media (Hoffman 2016). However, it is important to note that there is a noticeable dearth of research specifically focused on the generation and dissemination of conspiracy theories related to vaccination in Poland. This research gap is surprising considering that conspiracy theories serve as a unifying element within anti-vaccine communities and contribute to the formation of digital communities. Currently, there is a lack of comprehensive studies that shed light on this particular subject matter.

Michael Barkun identifies three distinct types of conspiracy theories (Barkun 2003). The first type pertains to specific events, the second type relates to systemic conspiracies, and the third type encompasses super conspiracies. The lowest category of conspiracy theories revolves around individual incidents. For instance, it includes theories suggesting that the death of Princess Diana was either a murder or a staged event. The second category is more complex as it weaves together multiple narratives, such as the functioning of the Illuminati. Lastly, the third category involves cases like the notion of Jewish people controlling the world or the claim that the US government faked the moon landing. In the context of this article, the authors have chosen to focus on the first category, as the COVID-19 pandemic falls under conspiracy theories concerning a specific event.

It is crucial to distinguish between a conspiracy theory and a conspiracy narrative. As defined by Agnieszka Demczuk, conspiracy narratives encompass all statements, regardless of their truthfulness, that convey the belief that essential information about public affairs is deliberately concealed due to covert actions carried out by individuals or groups collaborating for personal gain at the expense of the greater community's interests (Demczuk, Czech, Ścigaj 2020, p. 4). Therefore, conspiracy narratives and conspiracy theories are distinct terms, although they can complement each other. There are several reasons why society tends to believe in conspiracy theories. The literature on the subject highlights the strong need for cognitive closure. When faced with content redundancy, panic, or fear, individuals seek quick and simple explanations for the situation (Schneider 2021). Additionally, feelings of powerlessness and the fear of the unknown influence people's inclination to believe in conspiracy theories (Lewandowsky, Cook 2020). Moreover, during times of crisis, society seeks answers that align with their pre-existing beliefs, opinions, or perspectives, which reinforces their faith in conspiracy theories (Kunda 1990; Strouda 2008). This inclination is associated with the dichotomous division of groups into "us" and "them", where "us" is perceived as superior and holds absolute values, while "them" is seen as separate and devoid of value.

## *Objectives of the Research Project*

The objective of the article is to address a research gap by examining the mechanisms involved in the creation, shaping, and dissemination of conspiracy theories within the digital community of anti-vaxxers. Furthermore, the authors aim to explore the narrative dimension (linguistic aspect of communication) constructed by vaccination opponents within a Facebook group. The project seeks to answer the following research questions:

RQ1: How do conspiracy theories serve as catalysts for the formation of anti-vaccine communities during the COVID-19 pandemic?

RQ2: What contextual factors, such as cultural, economic, political, or social influences, contribute to the generation of conspiracy theories?

The creation and dissemination of conspiracy theories are influenced by the ontological, epistemological, and axiological assumptions that prevail within virtual communities, situated in diverse contexts. Exploring the origins of these underlying principles serves as a driving force to venture into the realm of digital humanities, which provide a metaphorical yet transformative space for the emergence and evolution of communities. With these factors in mind, the project aims to accomplish the following objectives:

1. Identify the processes through which conspiracy theories emerge as catalysts for the formation of anti-vaccine communities during the COVID-19 pandemic, utilizing a specific Facebook group as a case study.
2. Identify the contextual factors (e.g., cultural, economic, political, social) that contribute to the generation of conspiracy theories within the same Facebook group as mentioned above.

## *Methodology: ethical challenges*

The research project faced a notable challenge pertaining to the chosen research methodology, particularly the use of covert non-participant observation. Ethical concerns arose regarding the study of a closed Facebook group without obtaining prior consent from its members. The community's established rules explicitly forbade the copying and dissemination of content beyond the group. Moreover, the researchers explored socially sensitive and contentious topics related to vaccination and potential complications that may arise after vaccination.

To address any uncertainties, the research team sought guidance from the Research Ethics Committee at the Faculty of Management and Social Communication of the Jagiellonian University. Following the established regulations, an initial letter was prepared, encompassing all ethical considerations. The researchers explicitly acknowledged the potential risks associated with the subject of vaccinations while emphasizing their commitment to ensuring that the chosen methodological approach adhered to the academic code of values upheld by the University. Upon reviewing the document, the Committee raised several additional queries, particularly regarding

the proper citation and paraphrasing of statements made by members of the virtual group. After providing comprehensive responses to the Committee's inquiries, the research team obtained permission to proceed with the study and publish the findings. However, it was stipulated that direct quotes from the group's users were prohibited, and any paraphrasing must not result in the identification of the respondents. However, considering the findings of the conducted research, it is deemed crucial to initiate a discussion regarding the ethical aspects of the researcher's approach. Scholars and scientists hold diverse opinions, highlighting both the benefits and potential controversies associated with covert non-participant observation. Piotr Nieporowski addresses doubts concerning the ethical dimension, as well as the positive aspects of covert observation, in an article titled "The ethics of covert participant observation as a research method in the social sciences":

Hidden participant observation, due to the introduction of the researcher into the research environment and enabling its better understanding, is a remedy for a number of imperfections of qualitative research methods. It is also a way to get to know the characteristics of isolated social groups characterized by difficult permeability or its complete lack. It also reduces the influence of a phenomenon called the Hawthorne effect on the results of the analysis (Nieporowski 2015, p. 75).

The authors concluded that it is reasonable to use research material obtained through covert non-participant observation to prepare scientific articles while ensuring reliable, ethical, and consistent anonymization/pseudonymization of data to protect the safety and well-being of the respondents. Michalina Chamuła highlights that observing a closed Facebook group enables the identification of newly formed interpersonal relationships and their significance for communication within the group. On the other hand, Ewa Dąbrowska-Prokopowska points out that obtaining consent from all members of the closed group, given its significant size, is impractical. Moreover, seeking such consent could disrupt the natural flow of communication. Due to the specific nature of the motorcycle enthusiasts' community being studied, there was a significant fear of entries being deleted or communication being moderated if the researchers' intentions were revealed. Consequently, content analysis studies were conducted without informing the users of the study group. In the article by Dąbrowska-Prokopowska, no visual material was included to preserve the anonymity of the users' entries. Only a synthetic description and scientific interpretation were provided (Dąbrowska-Prokopowska 2019, p. 8).

The authors argue that non-participant covert observation is the only viable research method to understand the intricate dynamics of an insular community that isolates itself from external influences. They contend that alternative observation methods could alter user behavior and disrupt the natural contributions within the community, potentially leading to denial of access for researchers. Kamil Miszewski raises the question of whether researchers have the right to solely study "good" communities that don't require covert observation to gather data (Miszewski 2007, p. 56). Earl Babbie, on the other hand, suggests that researchers employ covert

observation not to deceive subjects but to ensure more accurate and sincere data by allowing subjects to behave naturally without knowledge of being observed (Miszewski 2007, p. 51, cited in Babbie 2005, pp. 312–13). Based on these perspectives, the authors believe that the use of covert observation in their research is justified. It is important to note that the authors are primarily interested in understanding the natural mechanisms of conspiracy theory formation and emergence, rather than focusing on the subjective identities or behaviors of individual group members, and they have no intention to interfere with the group's behavior in any way.

### *Methodological strategy*

The methodological strategy employed in the study followed the principles of virtual ethnography (netnography) as described by Jemielniak (2013), combined with an exploratory case study approach outlined by Yin (2018). The researchers selected a Polish Facebook group consisting of individuals opposed to vaccination as the subject of investigation. Two research methods were utilized in the project. Firstly, covert non-participant observation was conducted, allowing the researchers to fully observe and record the phenomena and processes occurring within the digital community without interfering with the behavior being studied (Cybulska 2013). This approach facilitated a higher likelihood of understanding the group's dynamics by capturing their characteristic behavior in their natural environment. Secondly, textual data analysis was performed on the posts published from the start of the COVID-19 pandemic in Poland, specifically from March 2020 to June 2022. To streamline the analysis, the research team extracted four keywords or concepts – “coronavirus”, “COVID-19”, “COVID” and “SARS-CoV-2” – based on the frequency of their occurrence in the content.

The methodological strategy was carefully designed to facilitate a comprehensive analysis of the ever-evolving online interactions and social phenomena within the chosen digital group. The project was framed within the interpretative paradigm (Burrell, Morgan 1979), which provided a theoretical framework for examining the distinct language and communication patterns, often referred to as “newspeak” within the digital group. This approach aimed to capture the nuanced meanings, interpretations, and symbolic expressions embedded in the group's discourse, allowing for a deeper understanding of their collective beliefs, values, and perspectives. By adopting the interpretative paradigm, the researchers sought to uncover the underlying dynamics and social processes that shape the group's interactions and contribute to the formation of conspiracy theories related to vaccination.

## Data collection process

Due to the vast amount of information available within the virtual group, the research team recognized the need to implement a systematic approach to data collection. To effectively manage the process and ensure comprehensive coverage, the team decided to divide the data collection into smaller stages. This approach allowed for focused and structured analysis, facilitating a more in-depth exploration of the research questions. By organizing the data collection process into stages, the researchers could effectively navigate the abundance of information within the virtual group and extract meaningful insights from the collected data.

Figure 1. The process of downloading data from a Facebook group



Source: own work

Initially, the research team conducted covert observation of the group's users, monitoring their posts, comments, and reactions. This served as the foundation for extracting preliminary keywords. However, due to fluctuating results when entering specific keywords into the Facebook filter, a search method utilizing "sorting entries from the most recent first" was employed. Subsequently, the first pilot study was conducted, analyzing ten posts that contained the identified keywords. The team examined the frequency of keyword appearances and identified any specific contexts (such as cultural, social, economic, political, etc.) that stood out. Additionally, a basic analysis of language functions was performed to assess the experiences conveyed in the entries/comments, determining whether they predominantly conveyed positive, neutral, or negative sentiments. Taking into account the observations and conclusions drawn by all team members, two separate categorization keys were developed for entries and comments. To verify the accuracy of the adopted analytical assumptions, a second pilot study was conducted, allowing for adjustments. Notably, missing categories had to be added to the code trees as subsequent hidden content was discovered within the virtual group.

Finally, after verifying and accepting the categorization key, the formal research commenced, and the research material was transferred to the MAXQDA program for interpretation.

The primary aim of the coding approach implemented in the project was to elucidate the emergence of conspiracy theories within the group and discern the socio-cultural contexts associated with them. Given the chosen methodological



strategy, special attention was devoted to linguistic aspects. Based on the findings from the pilot studies, the research team made the following determinations: a) the sources and categories of knowledge are significant, b) temporal orientations (and their corresponding tone: positive, negative, or neutral) are also taken into account, and c) the attitude of group users towards the content is of importance. Furthermore, as an auxiliary objective, the team sought to explore concepts that would enable all readers to become acquainted with the distinct newspeak employed by anti-vaccine groups. It should be emphasized that the following overarching coding rules were established:

1. Entire entries/comments are encoded, they are not broken down into single sentences.
2. It is encoded first with the main code and then with the sub code (subcode).
3. Response to response is not coded [i.e. sub-comments] (only those comments that are a reply to the post/comment are of interest).
4. Non-substantive comments are rejected: emojis, gifs, pictures, screenshots, videos, memes, tags, comments type: ok, cool, cool.
5. There is no limit to the number of (potential/possible) codes.
6. Images/memes etc. are not analyzed

Figure 2. The categorization key for entries is as follows:

code	subcode	explanation
post category	informative, interrogative, conspiracy, provocative	the purpose of the code was to indicate the type and nature of the post
context	politics, culture, economy, healthcare, education, international affairs, religion, alternative medicine, society, history, no context	the purpose of the code was to determine the context of the post
emotional aspects	positive, negative, neutral	the purpose of the emotional aspects category was to characterize the tone of the utterance
threat type	death, disinformation, disease, complications, the collapse of democracy, enslavement, threats to health/life of loved ones, conspiracy, no threat consequences, difficult to predict	the purpose of the threat type category was to indicate what users on the group are most afraid of
the user's attitude towards the group	indifference, disrespectful attitude/arrogance fear, solidarity, supporting (commands/recommendations/advice), enemy, doubting/(disbelief), ironic	the purpose of the user attitude category was to define the user's attitude towards the group

Source: own work

Figure 3. Categorization key for comments is as follows:

code	subcode	explanation
language features of comments	expressive, impressionistic, cognitive, metalinguistic, phatic, poetic	the purpose of the entry was to determine the language functions of a given comment. This division was adopted in accordance with the literature of the subject by R. Jakobson
source of knowledge	empiric – someone else’s, empiric – family, own experience	the purpose of the source of knowledge category was to assess where users get their knowledge about the coronavirus
categories of cognition	magic, pseudomedical, pseudo-rational rational	the purpose of this category was to define the nature of a given comment
emotional aspects	positive, negative, neutral	the purpose of the emotional aspects category was to characterize the tone of the utterance
temporal orientation	positive past, neutral past, negative past, positive present, neutral present, negative present, positive future, neutral future, negative future, hard to define	the purpose of the temporal orientation category was to indicate what period the comment concerns
authority	group leader, group users (referring to other users, believing in the “power” of the group, treating it as a kind of guru), doctors, medical workers, family/relatives/friends, journalists/media-public figures, no authority in the post/comment, law/external aspects politicians	the purpose of the authority category was to determine who the users refer to in their comments
context	policy, culture, economy, healthcare/medicine/pharmacy, education, international/EU affairs, religion, alternative medicine, society, law, history	the purpose of the code was to determine the context of the comments
threat type	death, disinformation, disease complications, the collapse of democracy, enslavement threats to health/life of loved ones, conspiracy consequences difficult to predict	the purpose of the threat type category was to indicate what users on the group are most afraid of
the user’s attitude towards the group	indifference, disrespectful attitude/arrogance fear, solidarity, supporting (commands/recommendations/advice), enemy, doubting/(disbelief), ironic	the purpose of the user’s attitude category was to define the user’s attitude towards the group

Source: own work

## Discussion of findings

### Results of quantitative and qualitative research

Our analysis unveiled several distinctions as well as certain similarities in the communication within the Polish Facebook group during the COVID-19 pandemic. The authors of the article scrutinized posts and comments utilizing the aforementioned keywords: covid, covid-19, coronavirus, and SARS-CoV-2. The summarized findings encompass both quantitative and qualitative aspects, and they are presented as follows:

Figure 4. Quantitative research results

keyword	number of posts	number of comments
COVID	58	512
COVID-19	37	597
CORONAVIRUS	71	1100
SARS-CoV-2	47	680

Source: own work

Figure 5. Quantitative research results

category	keyword COVID	keyword COVID-19	keyword CORONAVIRUS	keyword SARS-CoV-2
zone	everyday / existential life	discussion space	media/ public	social life
language	informal speech	informal speech	formal speech	colloquial/ ironic speech
attitude	supportive/neutral	hostile to the system/supporting the united people	hostile	hostile/irony
function	integrating	exchange of experiences	polarizing	ridicule/insult selected social groups
subject evoking the most extreme emotions	pregnancy	political aspects	police, education, economy	negative/ catastrophic visions of the present

Source: own work

In this section of the article, the authors focused on analyzing the qualitative findings. The most frequently used “keyword” in relation to COVID-19 was primarily associated with everyday life. Posts and comments containing this

keyword exhibited a neutral and supportive tone. Among the users, discussions related to pregnancy evoked the strongest emotions when connected to the indicated keyword. The observations conducted indicated that entries and comments containing the word “COVID” primarily served as a means of integration within the group. Users offered advice, responded to inquiries, and shared tips.

Regarding the keyword “coronavirus”, it predominantly encompassed discussions revolving around the media and public life. Numerous entries centered on crucial societal matters such as education, healthcare, legal regulations, and the implementation of restrictions. Users often referred to external sources, providing links to articles, press reports, or governmental announcements, many of which were of a pseudo-scientific nature. Consequently, formal language prevailed in the interactions among group members. Many individuals employed specialized terminology when discussing legal, medical, or educational aspects. Formal speech was often used to express dislike or hostility towards the system, people in power, and politicians. The topics discussed frequently led to conflicts and arguments. Smaller “camps” emerged within the community, associating themselves as either supporters or opponents of specific issues or topics. However, it is particularly interesting to note how the nature of the discussion changed when press materials were introduced. Entries that lacked such materials tended to take the form of loose, neutral polemics or exchanges of experiences. On the other hand, entries containing press materials became a catalyst for negative phenomena, including hate speech, mutual aversion, and even the exclusion of selected social groups.

Regarding the keyword “COVID-19,” it served two primary functions within the group. Firstly, statements aimed to criticize politicians and administrators, including those in the education system. Group members highlighted numerous perceived failures of the Polish government and expressed dissatisfaction with changes that they believed had disastrous consequences, such as the requirement to wear masks outdoors or the closure of educational institutions. Secondly, open discussions fostered an environment that encouraged participants to freely express their thoughts, cultivating a sense of support and complete tolerance. The shared solidarity was intended to embolden users to take decisive actions, such as openly opposing implemented restrictions or changes. Taking active steps to transform the perceived “negative” world became a rallying cry, as it was believed that this world was under the control of malevolent individuals who showed no regard for the lives of others. The topic that provoked the most conflicts and gave rise to exclusionary language was politics. The mere mention of a person from the political scene or a Polish political party would trigger a barrage of comments, leading to a complete transformation of the overall narrative.

An interesting case concerning the relationship between entries and comments is the material collected using the keyword “SARS-CoV-2”. The obtained content focused on social life, specifically its medical dimension. It is important to note that users allowed themselves to make ironic and malicious comments, sparing no bitter words towards those they deemed responsible for the current state of affairs. Reflections on the present became characteristic of the keyword “SARS-CoV-2”.

Members of the virtual community entertained catastrophic visions of what could happen to individuals at any moment, as it felt like a form of oppression. The potential for misfortune, ranging from enslavement to severe complications or death, loomed over everyone. As a result, the users of the group directed their hatred towards those they believed were responsible for this situation. The aim of the discussions was to isolate and punish specific social groups or individuals for their actions. In particular, the material containing “SARS-CoV-2” contained numerous instances of hate speech. Language transformed into a tool not only for exchanging experiences or opinions but also into a metaphorical “whip” aimed at those identified as the community’s tormentors.

### *Slang in a Facebook anti-vaccine group: hate speech as a catalyst for emerging conspiracy theories*

The speed with which new words and expressions spread in online groups contributes significantly to their acceptance as language norms. Virtual platforms such as Facebook enable rapid exchange of content, facilitating the standardization and adaptation of a specific slang in a short time. According to research on the dynamics of online language, the Internet accelerates a process that would take years in traditional communities (Danet, Herring 2007). In the case of the group in question, this slang functions not only as a code but also as a means of emphasizing distinctiveness and accelerating the processes of social exclusion towards outsiders.

Based on the observations, a distinct set of words emerged within the analyzed Polish anti-vaccine group on Facebook. These words include: “covid”, which refers to the name of the common cold symptom complex, “magic shots”, “harvesting”, “madness was prepared by” (implicitly referring to the current government in Poland, Law and Justice – PIS), “murderers in aprons”, “medical plebs”, “experiment”, “doped teachers”, “pinched people”, “go to slaughter”, “elixir of eternal happiness”, “totalitarian regime” and “cov1984”.

Based on the conducted research, it has been revealed that language plays a crucial role in influencing the cognitive and interpretive abilities of group users. The creation of unique words, similar to a form of newspeak, formed the basis of the virtual community’s functioning. These individual expressions, acting as metaphorical codes or puzzles, served various purposes. Firstly, they obstructed access to the processed information within the group and proved challenging to decipher for outsiders. Secondly, they allowed for the manipulation of recipients’ imaginations by invoking familiar contexts, be it cultural, literary, or political (such as referencing well-known political figures or iconic fictional characters). Thirdly, they fostered integration among users, establishing a shared platform for dialogue. The term “we” referred to individuals familiar with the group’s language, while “they” denoted opponents or adversaries. Lastly, the language facilitated the expression of aversion or even hatred towards individuals who, among other things, supported vaccination or complied with decisions made by the Polish court.

The authors, focusing on the linguistic aspects, particularly examined the metaphor of the mask, which clearly distinguished between opponents and supporters of vaccination. According to the members of the digital community, those who are “uninitiated” and blindly follow the mainstream are considered to be enslaved individuals. They are believed to be unaware of the truth and prefer to surround themselves with falsehoods, avoiding difficult questions. By wearing a mask, they are seen as oppressed and willingly surrender their freedom to the “others”, who are deemed responsible for the current state of affairs. Anti-vaxxers argue that it is easier for people to believe in the government’s explanations and passively accept new restrictions or legal regulations. To reveal their true selves, individuals need to reject any top-down schemes and firmly say “no”. Group members take pride in being “non-conformists” and firmly believe that their consciousness remains uninfluenced. The metaphor of the mask, frequently present in various content within the group, symbolizes the fight anti-vaxxers are engaged in against a corrupt capitalist system controlled by soulless individuals (such as the Masonic lodge or representatives of the Jewish nation).

The analysis of language within the anti-vaccine group aligns with the critical linguistics framework, where language is seen as a tool of power and control (Wodak, Meyer 2015). In this case, slang and hate speech serve as mechanisms of exclusion and identity formation through the negation and stigmatization of “others”. This approach highlights that language is not merely a means of communication but also a tool for creating and reproducing ideology, which is particularly dangerous in the context of conspiracy movements.

However, it is crucial to acknowledge the most dangerous and concerning aspect of language within the group, which supported and even encouraged the creation of content that constituted hate speech. Users within the group sought out scapegoats, including politicians, artists, police officers, vaccinated individuals, or even specific ethnic or religious groups, falsely accusing them and attributing all the world’s problems to them. Hate speech played a significant role in fueling the generated conspiracy theories, as emphasized by the authors. This process typically began with expressions of aversion and the identification of a specific segment of society deemed threatening. Once individuals or groups were targeted, mockery and ridicule ensued. There were attempts to dehumanize them and argue that they did not deserve equal rights, and in some extreme cases, they were even considered undeserving of life itself. As the cycle of hatred intensified, a presumption emerged that the scapegoats must have engaged in unacceptable behavior or actions. For example, if politicians were the subject of disapproval, they were immediately labeled as guilty of the alleged “mass murders” orchestrated by the Masonic government through COVID-19 vaccination campaigns. The authors were appalled by the abundance of entries and comments openly insulting specific individuals or entire communities. The language used often descended into vulgarity and called for aggression. Users believed that since they had identified the “guilty” parties, they had the right to insult them. While the authors will address specific mechanisms governing the functioning of conspiracy theories within the group in the following

paragraph, they found it crucial to highlight the role of hate speech in the virtual communication of the community.

It is worth noting that the radicalization process, fueled by language rich in metaphors and hate speech, occurred gradually. Initially, users limited themselves to expressing dissatisfaction or irony towards their opponents. However, over time, increasingly extreme and even vulgar content began to appear, consistent with the model of spiral radicalization described by McCauley and Moskaleiko (2008). In this context, language becomes a tool for cultivating a sense of threat and legitimizing aggressive actions against target social groups. Language, serving as a tool for integration, simultaneously built an internal hierarchy in the group. Users who used more complex, sophisticated or funny metaphors or created new linguistic forms gained greater prestige and authority in the community. The creation and popularization of new terms became a form of symbolic power, allowing users to express their uniqueness and cognitive superiority over other members of the group, which is characteristic of insular subcultures based on anti-establishment discourse (Fairclough 1995).

### *Overview: mechanisms of conspiracy theories in an anti-vaccine Facebook group*

The data obtained from this study revealed the presence of various mechanisms through which users engage in conspiracy theories. The first observed mechanism is the cause and effect pattern. This phenomenon involves the application of a cognitive bias known as the major event-major cause bias, wherein significant effects are linked to significant causes to align the magnitude of the event with the magnitude of the cause (Grzesiak-Feldman 2016, p. 16). Furthermore, during the unprecedented COVID-19 pandemic, a second defense mechanism known as the loss of control over reality may emerge. Research by Jennifer A. Whitson and Adam D. Galinsky (2008) has shown that when individuals perceive a lack of genuine control over reality, compensatory mechanisms are activated. People start to perceive connections between random stimuli and objects, attributing meaning to current and past events and attempting to predict the future (Grzesiak-Feldman 2016, p. 57). Order within a specific environment provides a sense of safety and security to society. When this order is disrupted, individuals tend to independently and immediately seek explanations for incomprehensible facts. What may seem inexplicable and challenging becomes simplified, clear, and pervasive through the application of magical thinking (Kozik 2021). The third mechanism observed is the Third-Person Effect (TPE). The concept of the third person focuses on individuals' evaluation of the impact of persuasive messages. People who experience this concept tend to believe that others are more susceptible to the message than they themselves are (Davison 1983; Tsay-Vogel 2020). Lastly, users exhibit a tendency to persist with familiar and established ways of interpreting phenomena. When individuals feel a loss of control over a situation, their inclination towards conspiracy tendencies

increases (Whitson, Galinsky 2008). Disseminating conspiracy theories within a Facebook group also serves as a coping mechanism to address fears, ignorance, and anxiety in the face of an unknown virus.

## *Conclusions*

In the processes of creating, shaping, and disseminating conspiracy theories, two interdependent elements play a significant role: language and emotions. Language enables the molding of the imagination of group members, motivating them to take action and establishing a platform for mutual understanding. Emotions, on the other hand, serve as carriers of content. Fear, concern, worry for loved ones, or hatred towards specific social groups serve as the impetus for the formation of such groups and active participation within them. Language provides a means to express emotions, and our feelings influence our perception of the reality surrounding us. Within virtual communities, emotionally charged expressions are also utilized to shape their unique space.

Analyzing the contexts in which specific conspiracy theories are embedded presents significant challenges due to the multifaceted nature of these statements. Within the group, users exhibit negativity not only towards specific groups like politicians, religious figures, or doctors but also towards anyone who holds different opinions. Furthermore, there are frequent contradictions within the group's thought process and interpretation. Users insult and disagree with each other on one topic, only to find agreement on an entirely different matter. For example, some express praise for homeopathy, while others dismiss it as ineffective. As a result, there is no singular, clearly defined standpoint that can be reliably assessed. The content within the group ranges widely in nature. Some posts manifest as hate speech, others focus on personal experiences, and some lack substantive value or present a chaotic mix of random content that is difficult to perceive as rational. Despite the pervasive disagreement, it is intriguing that users still attempt to communicate with one another. This may arise from a shared desire to "save" the world and unveil the true identities of those they perceive as being unaware or deceived. The underlying motivation might be a collective aspiration to bring about change and reveal what they believe to be the hidden truth.

Finally, the authors would like to remind you that they were obliged by the research ethics committee at the Jagiellonian University to anonymise the data. To a large extent, this made it difficult to present the analyzed content. It seems that showing the truth, i.e. what appeared in the group, would allow for a better presentation of the group's functioning. The authors believe that in the context of such difficult research as looking at conspiracy theories (especially those concerning health) – it is important to conduct a debate on the moral dimension of deciding to secretly observe a group. An important and unchanging question remains whether researchers should cover up the traces of activities that may potentially have tragic consequences in the future?



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The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## STRESZCZENIE

### **Teorie spiskowe tworzone przez cyfrowe społeczności antyszczepionkowe. Netnograficzne studium przypadku grupy na Facebooku**

Pandemia COVID-19 przyczyniła się do powstania grup antyszczepionkowych i rozpowszechniania teorii spiskowych w mediach społecznościowych. Te pseudonaukowe teorie spiskowe doprowadziły do rozprzestrzeniania się w społeczeństwie ksenofobicznych, rasistowskich i potencjalnie szkodliwych informacji. Niniejszy artykuł ma na celu wypełnienie luki badawczej poprzez zagłębienie się w czynniki kontekstowe, które wspierają rozwój teorii spiskowych. Celem tego artykułu jest rozpoznanie istoty i aktywności członków społeczności cyfrowej oraz zidentyfikowanie kontekstów (kulturowych, ekonomicznych, politycznych, społecznych itp.) wspierających proces generowania teorii spiskowych na przykładzie grupy na Facebooku. Zastosowanym podejściem metodologicznym będzie wirtualna etnografia (netnografia), przeprowadzona poprzez eksploracyjne studium przypadku wybranej grupy na Facebooku. Dane empiryczne pochodzą z okresu od marca 2020 r. do czerwca 2022 r. Aby usprawnić analizę, zespół badawczy wyodrębnił cztery słowa kluczowe lub pojęcia – “koronawirus”, “COVID-19”, “COVID” i “SARS-CoV-2” – w oparciu o częstotliwość ich występowania w treści. Badanie przyjmuje perspektywę interdyscyplinarną, opierając się na spostrzeżeniach z zakresu studiów medialnych, komunikacji społecznej, socjologii i antropologii. Celem niniejszego artykułu jest przedstawienie aktualnego stanu projektu, który otrzymał dofinansowanie w ramach Programu Strategicznego Inicjatywa Doskonałości Uniwersytetu Jagiellońskiego.

**Słowa kluczowe:** teorie spiskowe, netnografia, społeczności cyfrowe, COVID-19, media społecznościowe.

Early View