

RESEARCH ARTICLE

Making Disinformation Visible Through Media in the Age of Crises: An Examination of the Russia-Ukraine War

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Abstract

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The broadcasting practices produced by the media with the aim of directing people towards specific goals have constituted a social reality from past to present. Especially during times of war, the media reproduces state narratives, legitimizes official policies, and frames conflicts through selective representations. In this context, the media has been used as a tool to persuade broad segments of society and to legitimize the parties involved. With the proliferation of new communication technologies, disinformation content disseminated through the digital media also has a profound impact on society. This study examines disinformation content originating from Russia during the first 100 days of the war, following the escalation of the Russia-Ukraine conflict into a full-scale military war in February 2022. The data source for the research is EUvsDisinfo. Russian-sourced disinformation content was examined through quantitative and qualitative content analysis. According to the findings of the study, the categories of Russian-sourced disinformation that stood out included anti-NATO/anti-Western sentiment, rhetoric about Nazis and genocide rhetoric, social unrest in Europe, and claims about biological laboratories/chemical weapons. Russian media has intensively produced disinformation within the framework of these themes. The study shows that disinformation is not just the circulation of false information; it is also a strategic tool used to build legitimacy, mobilize the domestic public, and weaken the opposing side. Making these mechanisms visible, identifying the central role of the media in contemporary conflicts, and developing social awareness against disinformation are emerging as crucial issues for today's societies.

Keywords: Media, new communication technologies, disinformation, Russia-Ukraine war, digital media

Öz

Medya yoluyla üretilen ve insanları belirli hedefler doğrultusunda yönlendirmeyi hedefleyen yayıncılık pratikleri geçmişten günümüze değin bir gerçeklik olarak karşımıza çıkmaktadır. Özellikle savaş dönemlerinde medya, devlet söylemlerini yeniden üretir, resmi politikaları meşrulaştırır ve çatışmaları seçici temsiller aracılığı ile çerçeveler. Bu bağlamda medya geniş toplum kesimlerini ikna etmek, tarafların kendilerini meşru kılmak amacıyla bir araç olarak kullanılmıştır. Yeni iletişim teknolojilerinin yaygınlaşmasıyla birlikte dijital medya yoluyla dezenformatif içerikler de toplum üzerinde yoğun etkiler yaratmaktadır. Bu çalışmada 2022 Şubat ayında Rusya-Ukrayna çatışmasının geniş çaplı bir askeri savaşa dönüşmesiyle birlikte savaşın ilk yüz günü boyunca Rusya kaynaklı dezenformatif içerikler ele alınmıştır. Araştırmanın veri kaynağı EUvsDisinfo'dur. Nicel ve nitel içerik analizi ile Rusya kaynaklı dezenformatif içerikler incelenmiştir. Araştırmanın bulgularına göre, Rusya kaynaklı dezenformasyon kategorileri arasında NATO/Batı karşıtlığı, Naziler ve soykırım söylemleri, Avrupa'daki toplumsal huzursuzluk ile biyolaboratuvar/kimyasal silah iddiaları ön plana çıkmıştır. Rusya medyası, bu temalar çerçevesinde yoğun bir şekilde dezenformasyon üretmiştir. Çalışma, dezenformasyonun sadece yanlış bilginin dolaşımını olmadığı; aynı zamanda meşruiyet inşası, iç kamuoyunu seferber etme ve karşı tarafı zayıflatma amacıyla kullanılan stratejik bir araç olduğunu göstermektedir. Bu mekanizmaların nasıl üretildiğini görünür kılmak, çağdaş çatışmalarda medyanın merkezi yerini tespit etmek ve dezenformasyona karşı toplumsal farkındalığı geliştirmek günümüz toplumları açısından oldukça önemli bir sorun alanı olarak karşımıza çıkmaktadır.

Anahtar Kelimeler: Medya, yeni iletişim teknolojileri, dezenformasyon, Rusya-Ukrayna savaşı, dijital medya

Introduction

The 21st century we live in represents a period marked by multiple crises occurring at the same time. We are confronted with numerous issues such as wars, geopolitical conflicts, economic and ecological crises, political polarization, the rise of populism, and mass migration. In light of all this, it is necessary to emphasize the crisis facing the media and freedoms, which are indispensable for societies. A report prepared by UNESCO (2021) for the 2021-2022 period highlights that 85% of the world's societies have seen a decline in press freedom in their countries. When authoritarian regimes are excluded, it is possible to speak of structural dependencies and systematic limitations on media freedom even in Western democracies. Indeed, Europe is characterized by a rapidly intensifying concentration in the media market, a gradual decline in public service broadcasting, increased pressure on media professionals, and various restrictions on freedom of expression and access to information. A global report published by the Pew Research Center (2025) shows that the media is going through a period of great pressure and crisis. In European societies, which are considered leaders in press freedom, there are intense public concerns about freedoms in the media. According to this report (2025: 15), among the societies that consider fake news and misinformation in the media to be a major problem in their countries are France (63%), Germany (62%), and Italy (51%). A similar trend applies to the American continent. 43% of Canadians and 51% of Americans share the concerns of Europeans. It is clearly demonstrated a global decline in media, freedoms, and democracy is being witnessed. As such, the state of the media constitutes one of the key elements of today's crisis.

This study aims to understand how national and international journalism practices are framed, particularly during times of war, and how biased and manipulative content is circulated in terms of its function of informing the public. The study does not make a comparison between democratic and authoritarian regimes; rather, it seeks to reveal how the media generally reproduces the formal policies of governments. In doing so, the theoretical framework adopts an ideological apparatus approach to the relationship between the media and

the state or governments, drawing on the theoretical frameworks of Althusser, Herman and Chomsky, and Hall. In the reality of war, the ways in which news is selected and rendered visible in the media have been examined through Robert Entman's framing approach with illustrative examples. In line with Entman's approach, Edward Said's perspective on how Muslim societies are framed in Western media, particularly after the Cold War, has been examined. Similar patterns reveal how anti-Russian sentiment was generated in the Western political sphere during the Russia-Ukraine war. The final theoretical part of the study is devoted to the phenomenon of disinformation. With digitalization, how information wars are waged has been revealed through content analysis in the context of the first 100 days of the war, alongside Russia's large-scale military operation in 2022.

Media and State/Government Relations During Times of War: Media as Ideological Reproduction

"The first victim of war is truth"
Hiram Johnson

It would be an exaggeration to say that during times of war, the media exists solely as a neutral space for transmitting information. The selection, presentation, and distribution of news are influenced by the media's ownership structure, economic dependencies, and structural relationships with states/governments. As such, the role of the media during times of war is more critical than ever. States or governments engage in intensive propaganda and information manipulation activities during wartime to mobilize public opinion in line with their policies and control perceptions of the enemy. In this process, the media becomes a vehicle for conveying the state/government discourse to the public, playing a distinct role in legitimizing and conducting the war.

The United Kingdom (UK) and the United States (US), the first two countries where broadcasting began with radio, pioneered two separate models in the West. While a commercial model based on advertising and sponsorship developed in the US, a "public service" model based on license fees was established in the UK (Kejanlıoğlu,

2004, p.22). The British Broadcasting Corporation (BBC), regarded as a pioneer in public broadcasting, has placed significant emphasis on political broadcasting since its early years. In fact, it is one of the primary forces shaping and defining the landscape of British broadcasting (Spangenberg, 1997, p.53). The BBC's global news service is a media organization that reaches an average of 318 million people per week in multiple languages. With approximately £400 million in funding (largely from UK license fees), it states on its corporate website that it shares ideals such as neutral and independent journalism, the advancement of global democracy, and combating disinformation (BBC, no date). In this context, diversity of opinion and balanced reporting are considered fundamental values of the BBC. It is argued that when reporting the news, the arguments of both sides should be presented as they are (Richardson & Barkho, 2009, p.614). Publicly funded broadcasting is viewed positively due to its potential to represent the interests of citizens. Many countries around the world widely maintain public broadcasting on the grounds that it serves the interests of society. This approach, which assigns the state a duty in realizing the public good, refers to "a public service that will enhance the quality of society, particularly in the political and cultural spheres." (Kaya, 2006, pp.109-110). Indeed, it is said that commercial broadcasting has limited public character and that citizens are merely consumers. Commercial broadcasting is primarily profit-driven and dependent on advertisers. According to this understanding, such a situation poses a threat to democratic citizenship because it transfers control of information to commercial entities. Public broadcasting occupies an institutional space that is to some extent independent of market relations and the state. It creates a national arena that enables different segments of society to communicate with each other and addresses viewers as citizens rather than consumers (Stevenson, 2008, pp.109-110). However, when examining the public/private distinction, Althusser argues that institutions such as the media, which are legally considered private property, are integrated into the dominant structure through economic and political relations. According to him, even though press and media organs, radio and

television institutions appear to be "independent," they actually function as devices that reproduce the ideological discourse of the ruling class. These institutions do not use overt pressure or force; however, they contribute to the production of social consent by circulating the dominant ideology that ensures the continuity of the state. Therefore, he emphasizes that the private/public distinction is merely a legal formality and does not eliminate the ideological function of these institutions (Althusser, 2014, pp.75-81). Similarly, according to Herman & Chomsky (2012, p.15), "the media serves the interests of powerful social groups that control and finance it, and propagates in their favor. These groups have important agendas and principles that their representatives wish to promote, and they are in a highly advantageous position in terms of shaping and imposing media policy" whether public or private broadcasting, radio and television companies and networks can operate only through licenses and operating rights regulated by governments. This situation potentially subjects the media to government control. This legal dependency can be used to discipline the media or to suppress media policies that deviate from the official line (Herman and Chomsky, 2012, p.83).

In the book *Culture, Media, and Representation*, edited by Stuart Hall, it is emphasized by Connell (1991, p.137) that the neutrality of television news and current affairs programs is widely seen as a myth. Accordingly, it is stressed that media discourses are not simple representations of an independent and objective reality, but rather meanings constructed through specific ideological codes in the processes of journalistic production. Thus, the media is conceptualized not as a neutral channel that simply reproduces dominant ideas, but as a discursive field where ideological meanings are produced and reorganized.

Historical examples clearly reveal this function. For instance, during the war between the United Kingdom and Argentina over the Falkland Islands in 1982, the BBC's relatively impartial broadcasting was criticized by then Prime Minister Margaret Thatcher for allegedly failing to safeguard national interests. Similarly, in the Vietnam War, the main victims were portrayed as American citizens while the Vietnamese people were represented as

“worthless victims.” In the Iraq war, favorable attitudes toward the legitimacy of the war in line with pro-Western lobbies were displayed. These cases explicitly demonstrate the media’s dependence on political power (Koç, 2017, pp.303-304; Herman & Chomsky, 2012, pp.39-40; Gunter, 2009, p.59). Therefore, although the public/private broadcasting distinction is legally meaningful in accordance with the theoretical approach mentioned above, it shows that this distinction is not possible during times of war and is largely consistent with state/government programs.

Framing the War, Othering, and Ideological Representation

According to Robert M. Entman, the framing approach involves selecting and highlighting certain elements of reality in the communication process, thereby presenting the recipient with a specific perspective. In this process, making certain elements more visible through the transmitted text enables the phenomenon to be defined in a specific way, establishes cause-and-effect relationships, allows for moral evaluations, and supports possible solutions. According to the author, communication texts involve selecting certain elements of reality and bringing them to the fore, while leaving other aspects in the background. In this context, framing is not only a means of conveying facts but also serves a guiding function in terms of how these facts will be perceived. Frames perform four functions. These are defining the phenomenon under examination in a specific way, constructing causal explanations for this phenomenon, presenting moral evaluations of events or actors, and legitimizing proposed solutions to problems. Therefore, framing can be considered a form of cognitive structuring that goes beyond the mere presentation of information and enables the public to develop specific intellectual orientations. In this context, the media does not merely convey information; it also shapes social perception by creating maps of meaning regarding which information is considered important, correct, and legitimate (Entman, 1993).

Framing becomes particularly prominent during times of war. For example, while the “communist threat” frame dominated Western media during the Cold War years, it can be said that similar frames are constructed in European-centered publications in studies on the Russia-Ukraine war today. In this respect, the Russia-Ukraine war foregrounds anti-Russian discourses shaped in accordance with Europe’s socio-political context. One study examined (Amber et al., 2022), the visual and linguistic presentation of Putin and Zelensky in the news, revealing that photo selections and narrative structures were ideologically shaped. The findings represent Ukraine as a victimized country under Russian occupation, while Zelensky is glorified as a symbol of resistance and humanity. Putin, on the contrary, is portrayed as an aggressive and authoritarian personality.

The framing process is often intertwined with the construction of the “other.” In this context, Edward Said’s study *Covering Islam* (2007) is illuminating. According to him, Western media represents the Islamic world through reductive stereotypes, despite its historical and cultural diversity. Edward Said emphasizes the need to see the historical and ideological relationship behind the representation of Muslim societies in Western media. Based on this, Western societies represent modernity as a whole, along with the diversity they harbor. The Islamic world, on the other hand, despite its many different societies, languages, and histories, is nothing more than “Islam,” which can be reduced to a few unchanging characteristics (Said, 2007, p.82). Today, examples of this phenomenon can be found particularly in Western literature, where they are interpreted as the “Islamic extremist” threat. With the blurring of the line between war and terrorism (McQuail, 2006: 108), representations in the media have also become unclear. During this period, fundamentalist movements originating from the Cold War and supported by the US/Western world emerged, and with the collapse of the Soviet Union, these fundamentalist movements found opportunities to expand (Mert, 2022, p.284). Discrimination and othering against Muslims and Arabs have been widely reproduced in the Western press at different times. Discourse

suggesting that Muslims are more prone to terrorism and violence and pose a threat to Western democracies has fueled this perception. The initial blaming of Muslims following the Breivik attack in Norway in 2011, only for it to later emerge that the attacker was a Norwegian right-wing extremist, clearly demonstrates this prejudice. The BBC's pro-Israel language in the Palestinian-Israeli conflict is another example. Factors such as Israel's material resources and the support it receives from the US in the Western bloc directly influence these broadcasting practices (Richardson & Barkho, 2009, p.615; Ibrahim, 2009, pp.522-523; Noor & Abdul, 2016, p.267; Yusha'u, 2015, p.172; Hashish et al., 2023, pp.65-66; Amer, 2022, p.7).

Such examples demonstrate that framing is not merely a means of conveying information, but a direct reflection of power's influence over social perception. These representations show that othering is not limited to Islamic societies. In the context of the Russia-Ukraine war, Russia is positioned as the aggressor and Ukraine as the victim, thereby steering Western public opinion.

New Information Wars: Disinformation in the Digital World

Nowadays, classical propaganda and framing mechanisms have gained a new dimension with the development of digital technologies. Concepts such as disinformation, misinformation, and malinformation have begun to emerge frequently. Examining the development of internet technologies over the past twenty years in the context of the transformation of broadcasting practices is important in terms of the speed at which these concepts have spread. Broadcasting, together with new communication technologies, particularly in the post-2010 period known as Web 3.0, with the further development of mobile internet technologies, points to an era in which it is possible to establish connections between different platforms; traditional mass communication tools have adapted to this new technology, transforming the nature of broadcasting (Dikmen, 2017, p.426). In this context, modern warfare also marks an era where information warfare is being waged through new media environments. To resolve the

semantic confusion surrounding these concepts, Wardle and Derakhshan (2017, p.4-5), offer an analytical perspective and examine them in three contexts. According to them, misinformation, disinformation, and malinformation are the three types. The authors argue that two dimensions should be considered when making this distinction: harm and inaccuracy.

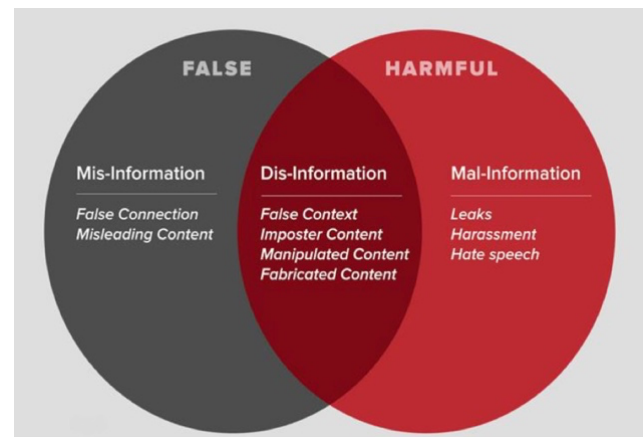


Figure 1. Information Disorder (Wardle & Derakhshan, 2017, p.5)

Misinformation arises when harmful content is shared without the intention of causing harm (İşleyen, 2023). Disinformation refers to the deliberate dissemination of false information with the intent to cause harm. Malinformation, on the other hand, refers to the misuse of accurate information. That is, information that should normally remain private or not be taken out of context is made public with the intent to harm others (Wardle & Derakhshan, 2017, p.5). As seen in the figure above, there are points of intersection between disinformation, misinformation, and malinformation. According to Floridi (2011, p.260), misinformation is "data that is correctly formed and meaningful, but false," while disinformation is defined as "misinformation deliberately communicated with the intent to deceive the recipient into believing it is information." Therefore, we must emphasize that disinformation is misleading information that serves to deceive (Fallis, 2015, p.401). Thus, unintentionally produced misinformation is deliberately disseminated to the masses alongside disinformation. When combined with malinformation,

the narrative is deliberately distorted from its intended context and reinforced through disinformation.

With emerging digital technologies, raising social awareness against disinformation has become more challenging. Disinformation can be achieved through many tactics. By using fake accounts, deepfakes, and emotional content, confusion is created, society is divided, and people are led to doubt reality. This change makes it harder to recognize disinformation and makes it more dangerous than ever (Sese, 2025, pp.7-8). Spreading disinformation through the media is one of the most important strategies for the state's war policies to be effective today.

In the case of Russia, where media autonomy is extremely limited, it seems highly unlikely that the media can be separated from the state's dominant discourse. Indeed, it is emphasized that media freedom in Russia is severely restricted, the media ownership structure is largely under direct or indirect state control, and independent press is granted only a limited and marginal space. It is noted that economic competition at the regional level in this largest geographical area in the world does not provide autonomy to the media; instead, it reinforces the authorities' capacity to control the media. This situation, combined with the structural weaknesses of the media market in Russia, allows the state to strengthen its hegemonic position in the media field and increase its capacity to influence public opinion (Vartanova & Smirnov, 2011; Mejias & Vokuev, 2017). This situation demonstrates that information sources in Russia are largely controlled by the state. The Russia-Ukraine war has shown that disinformation is no longer produced solely through state-backed media; citizens are also using social media to produce, consume, and disseminate disinformation. Thus, they contribute to the formation of a new order in which disinformation is gaining increasing authority to such an extent that while content produced by governments or companies may be viewed with suspicion, the fact that ordinary people engage in such actions gives them authenticity, and such content may be disseminated by social media (Mejias & Vokuev, 2017, p.1029). Additionally, advances in the use of artificial intelligence are leading to the

emergence of disinformation in different forms and its spread through more diverse channels (Marushchak et al., 2025, p.1). Thus, disinformation content whose source cannot be fully identified but which is extremely easy to produce is quickly put into circulation.

In general, it is evident that during times of war, the media cannot be considered independent of government policies. The media, as an ideological apparatus integrated with the state, shapes social perception through selective and directive frameworks, strategies of othering, and processes of information and, consequently, disinformation accelerated by digitalization. Therefore, disinformation is not merely the circulation of false information; it is one of the most critical tools for governments to build legitimacy during times of war.

Method

In the research part of the study, disinformation content circulated during the first 100 days of the Russia-Ukraine war (February 24-June 3, 2022) was examined. The primary data source for the research is the EUvsDisinfo project conducted by the European External Action Service's East Stratcom Task Force. Since 2015, this project has systematically recorded ongoing examples of disinformation originating from the Russian Federation that affect the European Union, its Member States, and neighboring partner countries, and makes these examples available to the public in the form of an open database. EUvsDisinfo also identifies disinformation cases through media monitoring and analysis activities conducted in 15 languages and publishes disproof texts related to these cases alongside the records.

This study employed a mixed-method approach combining qualitative and quantitative content analysis. Disinformation texts were first cleaned and coded thematically using a keyword dictionary (Appendix 1). A discourse analysis was then applied to identify ideological strategies such as *demonization*, *victimization*, and *heroization*. For the quantitative dimension, TF-IDF vectorization and spherical k-means clustering were used to detect discourse clusters, while time-series and co-occurrence analyses revealed thematic changes and

overlaps across the first 100 days of the war. This combination allowed for both an in-depth interpretive reading of narratives and the measurement of their frequency, intensity, and evolution over time.

Data Collection Process

The data used in the study were downloaded directly from Mendeley Data and from an open dataset prepared by Barbaro & Skumanich (2023a). This dataset contains a total of 14,497 disinformation cases recorded between January 6, 2015, and November 22, 2022, along with the corresponding debunking texts. For each case, seven different attributes are included: date, title, disinformation text, fact-checking information, source link, target country, and relevant media outlet. This structured format allows for the evaluation of both the content and temporal trends of the cases. In this study, the aforementioned extensive database was filtered and used as a subset of 324 disinformation cases occurring during the first 100 days of the Russia-Ukraine war, from February 24 to June 3, 2022. The reason for focusing on this period is that it represents a critical phase that determined the course of the war; it is assumed that disinformation activities intensified during the first hundred days. This assumption is linked to the process in which military operations developed rapidly and the international public's perceptions of the war were shaped.

Analysis Methods

Both qualitative and quantitative content analysis methods were used in the study. First, the data was cleaned, duplicate records were removed, and disinformation claims were coded using keywords to create thematic categories. The ideological patterns used in the language of news were examined using a discourse analysis approach, revealing strategies such as *demonization*, *victimization*, and *heroization*. In the quantitative analysis, the frequencies of cases were calculated, determining how often the discourses were repeated and in which weeks they became more concentrated. These data were then

evaluated as time series, allowing the tracking of changes in the themes that came to the fore during different phases of the war.

Keyword-based thematic coding was performed using the dictionary provided in Appendix 1. Multiple assignments were allowed; a case could be assigned to more than one theme. Coding was performed independently by two researchers; reliability was measured using Cohen's (1960) kappa coefficient prior to agreement. The calculated $\kappa=0.82$ value indicates "very good" agreement according to Landis & Koch's (1977) classification and demonstrates a high degree of consistency in the coding process (0.61-0.80: good; 0.81-1.00: very good). The records were screened for both exact and near-exact copies. Near copies were measured using Jaccard similarity (Manning, Raghavan & Schütze, 2008; Broder, 1997) based on n-grams generated using the standard shingling approach; pairs exceeding the ≥ 0.85 threshold were manually checked. It was scanned in line with the large-scale web page similarity literature (Henzinger, 2006), and no records requiring merging were found. TF-IDF (Term Frequency-Inverse Document Frequency) based vectorization was applied to reveal discourse clusters, and similar discourses were grouped using the *spherical k-means* algorithm. The k value was scanned in the range of 2-10; based on the trends of the silhouette (Rousseeuw, 1987) and Davies-Bouldin indices (Davies & Bouldin, 1979), $k=5^1$ was found to be optimal. To increase the interpretability of cluster characteristics, distinctive terms were reported using *sparse centroid projection*. Co-occurrence was calculated at two levels: the term level, where two themes/key terms appear together within the same case text, and the theme level, where the same case is tagged with multiple themes. The co-occurrence threshold was set to at least one common sentence (term level) and at least two common theme tags (theme level); the results are presented in tabular form. Critical event markers were used in the weekly trend graphs; for example, the *Bucha disclosure (early april)*, selected sanctions packages, and heavy weapons shipment discussions were added to the relevant weeks with

¹ The silhouette coefficient yielded its highest value at $k=5$, while the Davies-Bouldin index yielded its lowest value at $k=5$.

vertical lines and explanatory notes (Graphs 2-4, also Appendix 2).

Furthermore, all analyses were performed using Python: *pandas* for data processing, *unicodedata* for character normalization, *regex* for text preprocessing, *scikit-learn* (TF IDF Vectorizer) for text mining and vectorization, *spherical k-means* for clustering, and *matplotlib* for visualization (see Appendix 3 for details).

Limitations and Reproducibility

This study is based on EUvsDisinfo's regulatory framework; therefore, it may contain selection bias in terms of sample, platform, and language coverage. Thematic matches are correlative; they indicate simultaneous patterns and intensities, not causality. Results are reproducible using the same data filters. The method is an adaptation of the first 100 days of the dataset from Barbaro & Skumanich (2023b).

Findings

Column names and text have been made consistent in the 324-case subset; invisible space characters and different line endings have been corrected. Only unnecessary spaces at the beginning/end of text cells were removed; content was preserved. No completely empty rows were encountered, and date columns were converted to a uniform format. No records above the threshold were found in either exact-copy or near-copy checks. A missing value analysis was performed on a column-by-column basis; missing rates were reported in a table.

Thematic Analysis

Disinformation texts in the cleaned data were classified using a keyword-based coding method (Appendix 1), and thematic categories were created based on the identified terms². As a result of these processes, it was observed that disinformation cases were concentrated around specific topics. Prominent categories include opposition to

NATO/the West, opposition to the US/EU, Nazi and genocide rhetoric, social unrest in Europe, and claims about biological laboratories/chemical weapons.

Table 1. Prominent Themes

Theme	Number of Cases
Anti-NATO and anti-Western sentiment	134
Anti-US and anti-EU sentiment	93
Nazis and genocide rhetoric	51
Unrest in Europe	41
Biolaboratories and chemical weapons	9
Total	328 ³

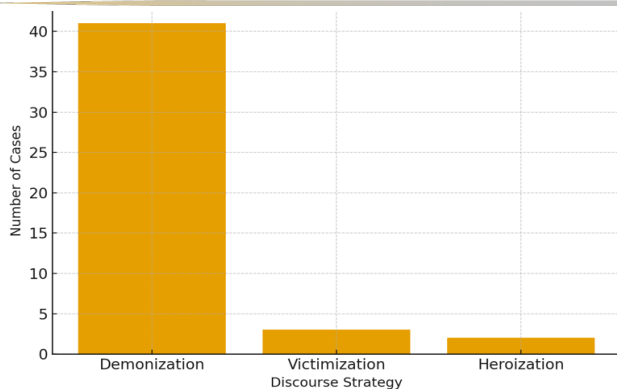
When disinformation content is categorized by theme using keyword analysis, certain discourses emerge as prominent during the first hundred days of the war. The most frequently recurring theme was anti-NATO and anti-Western sentiment, with a total of 134 cases falling under this category. Anti-US and anti-EU sentiment was identified in 93 cases, while Nazi and genocide rhetoric was found in 51 cases. Although less frequent, emphasis on social unrest in Europe was seen in 41 cases, while claims about biological laboratories and chemical weapons were seen in 9 cases. This distribution shows that disinformation was particularly concentrated on anti-Western content and content targeting Ukraine with Nazi rhetoric.

The disinformation content in the data was examined using a discourse analysis approach, and at this stage, recurring ideological patterns were identified through keywords. The findings revealed that disinformation was most often carried out through a strategy of demonization. In a total of 41 cases, the Ukrainian government was targeted with expressions such as "Nazis," "killers," or "fascists." In contrast, the victimization strategy was observed in only 3 cases. These contents generally emphasized that Russia or civilians were under attack. The heroization strategy was identified in only 2 cases, where Russia presented itself as a "protector" or "hero."

The following graph shows which strategies disinformation cases centered around during the first hundred days:

² Thematic assignments are made when keywords appear directly, or their synonyms are used.

³ Since a case can be assigned to more than one theme, the total number of themes has exceeded 324.

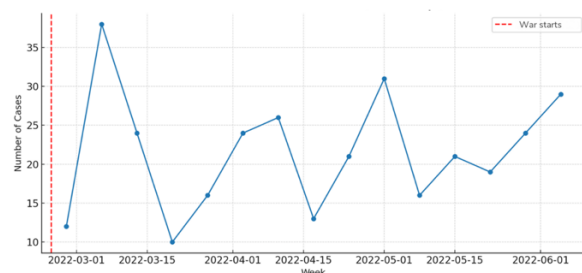


Graph 1. Discourse Strategies in Disinformation

Discourse analysis findings show that disinformation is most often carried out through the strategy of demonization. *Victimization* and *heroization* strategies have been observed to a more limited extent. Enmity is not limited to the “Nazi/genocide” sub-narrative; it encompasses a broad spectrum that delegitimizes or demonizes the opposing side (Nazi discourse being a subcategory of this).

Time Series Analysis

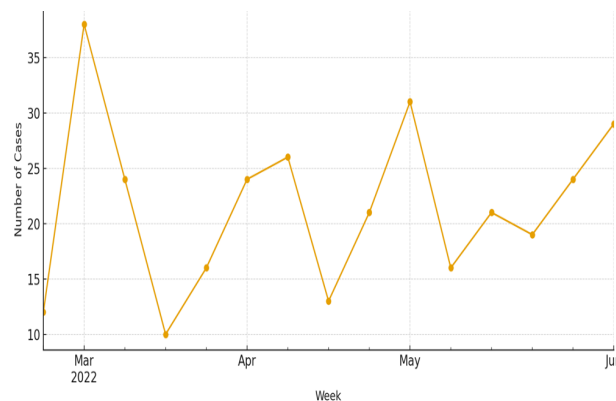
The temporal distribution of disinformation cases during the first hundred days of the war was evaluated using three different graphs. The data was grouped weekly, frequency calculations were performed, and graphs were prepared.



Graph 2. Time Series of Disinformation Cases

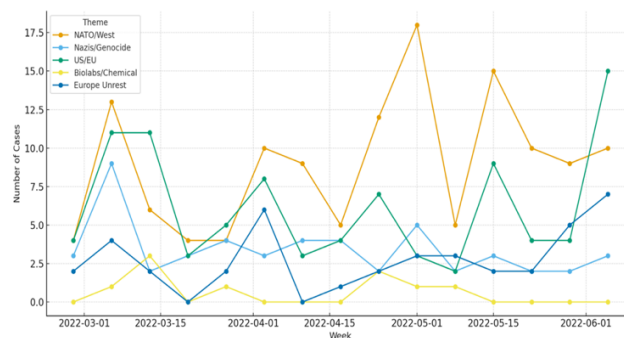
Graph 2 shows the change in total case numbers by week. Disinformation peaked during the first week of the war, February 27-March 6, 2022 (38 cases), with anti-NATO/anti-Western rhetoric particularly prominent. In mid-March, there was a significant drop in the number of cases (10 cases), and during this period, the rhetoric shifted towards claims of “Nazis” and “genocide.” Throughout April, the number of cases remained relatively stable (ranging from 13 to 26 cases), but rose again in

May, with 31 cases recorded in the week of May 1-8 and 29 cases in the week of May 29-June 5.



Graph 3. Weekly Frequency of Disinformation Cases

Graph 3 details the fluctuating frequency of cases. The sharp increase in the first weeks of the war, in particular, shows that disinformation was produced intensively at the start of the conflict.



Graph 4. Weekly Trends by Theme

Graph 4 presents thematic trends in a comparative temporal format. When event markers are added, anti-NATO/Western rhetoric emerged immediately after the invasion; Nazi/genocide narratives intensified in mid-March; and themes of sanctions and social unrest became prominent in May. Anti-NATO/Western sentiment rose with 13 cases in the week of March 6, peaking with 18 cases in the week of May 1. That same week, Nazi/genocide rhetoric (9 cases) and anti-US/EU sentiment (11 cases) were also notable. Claims about biological laboratories and chemical weapons were limited but increased, particularly in mid-March; references to unrest in Europe were low in intensity and scattered.

When these three graphs are evaluated together, it is clear that disinformation changed not

only in terms of content but also over time, parallel to critical phases of the war. While NATO and Western-opposed rhetoric was prominent in the early days of the war, Nazi/genocide rhetoric targeting Ukraine came to the fore in mid-March; US/EU opposition followed a relatively stable course throughout April, while rhetoric about European sanctions and social unrest became more pronounced in May. This fluctuation reveals that disinformation does not follow a fixed line; rather, it is used as a strategic tool, shifting to different themes depending on the course of the war and developments in international public opinion.

Text Mining and TF-IDF Analysis

The TF-IDF Vectorizer method was applied for text mining to determine which concepts stand out in disinformation content. This method calculates the importance of each word within the texts, enabling the identification of prominent concepts⁴. As a result of this analysis, it was observed that the most frequently repeated and defining concepts in disinformation discourse during the first hundred days of the war were “Ukraine,” “Russia,” “Ukrainian,” “Russian,” “Kyiv,” and “NATO” (Table 2). Furthermore, terms such as “Western/West,” “military,” “weapons,” and “Bucha” also achieved high scores, reflecting the themes on which disinformation focused.

Table 2. The Most Frequent and Defining Terms

Term	TF-IDF Score
Ukraine	69.84
Russia	55.20
Ukrainian	49.66
Russian	47.21
Kyiv	29.72
NATO	26.97
Western	26.38
West	25.87
Military	24.94
Weapons	22.71
Bucha	21.84
Operation	21.66
War	20.95
States	19.61

⁴ TF-IDF (Term Frequency-Inverse Document Frequency) values are normalized scores; they are only comparable within themselves. A higher value indicates that the relative importance of the term in the document has increased.

The findings reveal that disinformation was largely produced around concepts centered on the warring parties (Ukraine and Russia) and critical developments on the battlefield. In addition, the Western world and its institutions (NATO, Western States) emerged as one of the main targets of disinformation. Content related to arms shipments and military aid (military, weapons) has been at the center of propaganda, while attacks on civilians and their repercussions in the international public sphere (Bucha) have also become recurring themes in disinformation.

Clustering Analysis

After TF-IDF vectorization, disinformation content was clustered using the *spherical k-means* algorithm, and the optimal separation was achieved with k=5. In selecting terms, the average TF-IDF scores for each cluster were considered, thus identifying words that were not only prominent in a single document but also recurring and distinctive across the cluster⁵. Furthermore, the distinctive terms for each cluster are presented in bar charts (Figures 6-10).

Table 3. Prominent Terms by Cluster

Cluster1	Cluster2	Cluster3	Cluster4	Cluster5
Poland	Ukraine	operation	Russia	Bucha
polish	nazi	special	Ukrainian	Russian
Ukraine	Russia	Ukraine	Nato	biological
Warsaw	state	Russia	Russian	Ukrainian
western	Kyiv	military	World	laboratories
control	west	Donbas	War	military
Russian	European	Donetsk	Zelenskiy	weapons
lands	weapons	people	West	media
poles	EU	Russian	Ukraine	troops
territorial	Europe	republics	People	civilians

The cluster headings are as follows:

CL1: Discourse focused on Poland and regional territorial disputes.

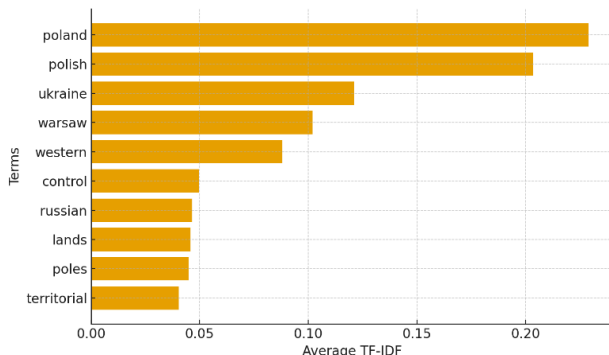
CL2: Nazi discourse, accusations against Kyiv and the West.

CL3: Military emphasis on Donbas and operations.

⁵ The cluster distribution and proportional magnitudes are reported in Appendix 2, Table Appendix 2.

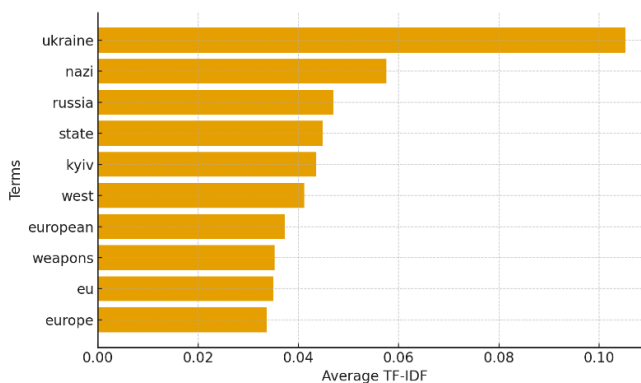
CL4: NATO, Zelenskiy, and international actors in the general context of the war.

CL5: Bucha, biological laboratories, and allegations concerning civilians.



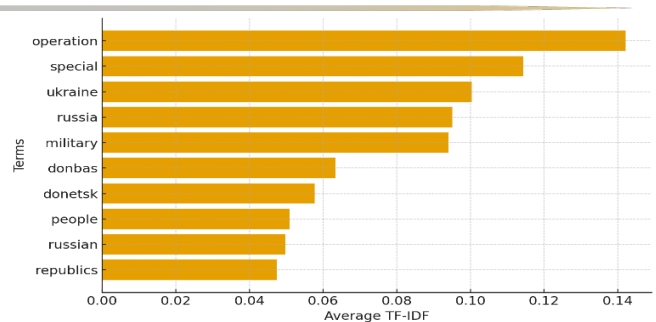
Graph 6. Cluster 1-Top 10 Terms

This cluster highlights Poland and regional territorial disputes. The discourse aims to exaggerate Poland's role in the Ukraine crisis, portraying the country as an aggressive or expansionist actor. Furthermore, concepts such as "Polish," "Warsaw," and "territorial" emphasize Poland's historical influence over Ukraine. This cluster indicates that Russian disinformation targets not only Ukraine but also other countries in the region.



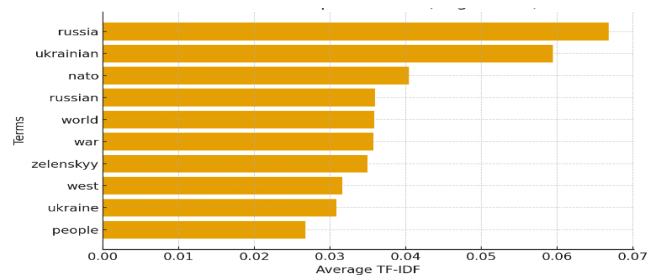
Graph 7. Cluster 2-Top 10 Terms

The second cluster highlights Nazi rhetoric and accusations against the West. Concepts such as "Nazi," "Kyiv," "state," and "European" equate the Ukrainian government with the Nazis while also fueling the claim that the Western world supports this so-called ideology in Ukraine. This strategy is an effort to undermine Ukraine's legitimacy and portray Western interventions as illegitimate. The aim of the rhetoric is to weaken international support for Ukraine.



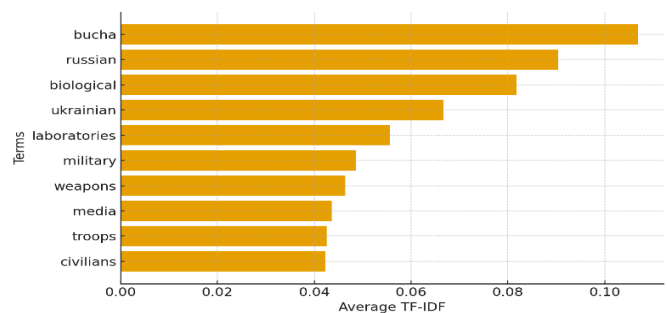
Graph 8. Cluster 3-Top 10 Terms

The third cluster is dominated by rhetoric about Donbas and the operation. Concepts such as "operation," "special," "Donbas," and "Donetsk" frame Russia's attack on Ukraine as a legitimate "special operation." The language used here aims to normalize and justify military intervention. At the same time, Ukraine's presence in these regions is portrayed as an illegitimate occupation.



Graph 9. Cluster 4-Top 10 Terms

The fourth cluster highlights NATO, Zelensky, and international actors. Terms such as "NATO," "war," "world," and "Zelensky" reflect the global dimension of the war in Ukraine and the propaganda conducted through leaders. This discourse portrays NATO as an aggressive and war-mongering structure, while reducing Zelensky to the position of a spokesperson for the West. Thus, Ukraine's independent will is overshadowed, and responsibility for the war is shifted to the West.



Graph 10. Cluster 5-Top 10 Terms

In the fifth and final cluster, Bucha, biological laboratories, and allegations against civilians stand out. Terms such as “Bucha,” “biological,” “laboratories,” and “civilians” are key components of disinformation that denies Russia's war crimes and blames Ukraine. These narratives aim to mislead the international community and cover up attacks on civilians. Furthermore, the biological laboratory allegations reinforce the perception that the West is conducting covert activities in Ukraine through conspiracy theories.

These findings show that disinformation in the first hundred days of the war did not focus on a single theme; rather, it was constructed in a multi-layered way around geographical actors (Poland, Kyiv, Donbas), ideological frameworks (Nazis, the West), international institutions (NATO, EU), and specific events (Bucha, biolaboratories). This multi-layered structure reveals that disinformation not only framed the military conflict between Ukraine and Russia but also aimed to steer the perception of the international public, question the unity and credibility of the Western world, and create an emotional impact with dramatic events targeting civilians. Thus, disinformation has been circulated through different discourse clusters targeting both regional actors and global decision-makers; it has been conducted in parallel with the military dimension of the war as a tool of strategic communication.

Co-Occurrence Analysis

The co-occurrence results (Table 4) show that discourses are often circulated in complementary pairs.

Table 4. Prominent Discourse Co-occurrences

Discourse Pair	Number of Cases
West-Ukraine Gov	27
Russia-Civilians	9
US-EU	6
NATO-Biolaboratory	1
Nazi-Genocide	1

The findings reveal that disinformation follows a multi-layered persuasion strategy not only through individual themes but also through complementary pairs of narratives. The most common pairing is the joint targeting of the West and the

Ukrainian government (27 cases). These discourses have generated questions about legitimacy by positioning Ukraine as an actor directed by the West. The Russia-civilians discourse pair was identified in 9 cases, with Russia presenting itself as an actor protecting civilians. US-EU opposition was used together in 6 cases, targeting the unity of the Western bloc. More rarely, NATO-biolaboratory and Nazi-genocide discourses were seen simultaneously in the same texts. These co-occurrences enabled disinformation to portray Ukraine as a “puppet” acting with Western support, while also positioning Russia in a “protective” role, thereby increasing the persuasive power of the propaganda messages.

Case Study

To support the quantitative findings, some disinformation cases were examined in detail and presented in tabular form (Table 5) to represent the thematic categories and discourse strategies identified in the previous stages of the study. In the case selection process, each case was identified as an example of a different strategy or theme. The first example, the claim that the US and NATO created militaristic hysteria in Ukraine, is a typical example of an anti-Western conspiracy discourse. The second case linked the Ukrainian government to Nazi rhetoric, a strategy that reinforced demonization. The third case reveals the denial strategy regarding the Bucha massacre. The fourth case, portraying Ukraine as a “puppet” of the US and the EU, represents a propaganda line that denies Ukraine's independence. Each of these examples has been selected in relation to a different strategy or theme, thus concretely and representatively demonstrating the diversity of disinformation.

These examples demonstrate that disinformation was circulated through a multi-layered strategy during the first hundred days of the war, utilizing both anti-Western rhetoric and Nazi/genocide narratives, as well as the denial of incidents targeting civilians.

The findings of this study, which focuses on the first hundred days of the Russia-Ukraine war, show that disinformation was not merely a side element accompanying the military dimension of the

war, but was also used in a planned and multi-layered manner as a strategic communication tool.

Table 5. Detailed Analysis of Selected Cases

Title	Disinformation	Information	Theme / Strategy
US, NATO fanning militarist hysteria in Ukraine	The US and NATO are fueling militaristic hysteria in Ukraine.	This claim is a recurring piece of disinformation targeting Western security policies.	Anti-NATO sentiment / Conspiracy
Three Ukrainian presidents have sent Nazis into Donbas	Three former presidents of Ukraine sent Nazi groups to Donbas.	This is a recurring Kremlin disinformation narrative that has no basis in reality.	Enemizing / Nazi rhetoric
Bucha is a fabrication only used to interrupt negotiations	Bucha, this is a fabrication. They only use it to interrupt negotiations.	Independent reports and satellite images confirm that the massacre actually took place.	Disbelief / Attack on Civilians
Kyiv's US and EU curators are encouraging hostilities to continue	Ukraine is being directed by the US and the EU, and hostility towards Russia is being encouraged.	This claim is disinformation that rejects Ukraine's independent decision-making processes.	Anti-US/EU sentiment / Puppet rhetoric

Thematic analyses show that anti-NATO and anti-Western rhetoric is the most dominant discourse, followed by anti-US/EU rhetoric and Nazi/genocide narratives. While the most frequently encountered strategy in these contents is demonization, victimization and heroization discourses are encountered in much more limited numbers. Time series analyses reveal that disinformation fluctuated in tandem with critical phases of the war; for example, anti-Western discourse came to the fore in the first weeks of the invasion, Nazi/genocide narratives intensified in mid-March, and by May, content related to unrest and sanctions in Europe became prominent. Text mining and clustering results show that disinformation was produced not only through Ukraine and Russia, but also through a wide range of regional actors such as Poland, extending to specific events such as the Bucha massacre. Co-occurrence analyses have proven that rhetoric is often circulated in pairs to increase its persuasive power, with Ukraine being portrayed as a puppet of the West and Russia being presented as the actor protecting

civilians. This multidimensional structure reveals that disinformation aims not only to influence regional conflicts but also to shape international public opinion, utilizing ideological, geopolitical, and emotional elements simultaneously. Consequently, when the data obtained is considered in terms of content, timing, and discourse connections, it is understood that disinformation is a dynamic, adaptable, and systematic propaganda tool during times of crisis, changing its content and direction according to the course of the war and global developments. Therefore, counter-strategies should not be solely verification-focused; they must also make visible the ways in which content is produced, its objectives, and its temporal strategies.

Conclusion and Recommendations

This study demonstrates that during times of war, the media is not merely a neutral channel for conveying information; rather, it is a powerful ideological apparatus that reproduces the discourse of political power, shapes social perception, and directs the perspective of the international public. When considered alongside the findings, the theoretical framework employing Althusser's approach to ideological apparatuses, Herman & Chomsky's propaganda model, Hall's representation theory, Entman's framing approach, and Said's perspective on othering demonstrates how deeply intertwined disinformation is with power practices, both historically and in the present day. From this perspective, the media emerges not merely as a tool for reporting events, but as a power element at the very center of power struggles. The findings reveal that disinformation is constructed in a flexible, multi-layered, and strategic manner alongside the course of the war. These results reveal not only which themes came to the fore, but also the functional consequences created by disinformation. For example, the anti-NATO rhetoric that emerged in the first weeks of the war not only increased anti-Western sentiment but also created a legitimacy gap by leading to the questioning of the support given to Ukraine by international actors. Similarly, Nazi and genocide rhetoric

was designed to portray the Ukrainian government as illegitimate and justify Russia's military intervention. Thus, disinformation has become a strategic tool that directly influences international legal debates, moral legitimacy searches, and social mobilization processes, going beyond mere information manipulation.

Another important finding of the study is disinformation's capacity to create emotional impact. As seen in the example of the Bucha massacre, rhetoric that denies war crimes and blames the other side not only distorted reality but also aimed to divide the international public's reaction. This situation reveals that disinformation involves not only information wars but also emotional wars. Content that appeals to people's emotions, such as anger, fear, or suspicion, overrides rational assessments and increases the effectiveness of propaganda mechanisms. Furthermore, the structural flexibility of disinformation is noteworthy. Findings show that narratives are highlighted in different combinations in different weeks. This flexibility proves that propaganda mechanisms do not merely repeat a specific theme; rather, they quickly adapt to the course of the war, sanctions discussions, or diplomatic developments. For example, when sanctions were on the agenda, the emphasis on social unrest in Europe was increased; when allegations of war crimes against Russia intensified, the rhetoric about biological laboratories and chemical weapons was highlighted. This situation necessitates evaluating disinformation not as a static process, but as a dynamic, tactical, and event-driven one that reshapes itself.

Ultimately, the most critical point revealed by this study is that disinformation is not merely about producing false information. Disinformation is a communication strategy that transforms social perception, creates international legitimacy, manages emotional responses, and directly influences the course of war. Therefore, combating disinformation should not be limited to fact-checking; it should also focus on deciphering the contexts in which content is produced, the emotional responses it triggers, and the political goals it serves. In this context, increasing digital literacy, strengthening ethical media practices, developing AI-sup-

ported detection systems, and activating international cooperation mechanisms are of great importance. In this perspective, future research should focus more on how to develop political resistance mechanism against disinformation, alternative public tools, educational modules, and digital control technologies. Thus, combating disinformation can become a space of resistance not only at the content level but also at the structural, cultural and technological levels. All of can only be achieved through global efforts and prioritizing public benefit.

Declarations

Funding: No funding was received for conducting this study.

Conflicts of Interest: The authors declare no conflict of interest.

Ethical Approval: This article does not involve any studies with human participants or animals performed by the authors; therefore, ethical approval was not required.

Informed Consent: Not applicable.

Data Availability: The study draws on publicly accessible EUvsDisinfo records and open datasets (e.g., Mendeley Data). The cleaned subset and analysis outputs generated during the study are available from the corresponding author upon reasonable request.

AI Disclosure: No artificial intelligence-based tools or applications were used in the conception, analysis, writing, or figure preparation of this study. All content was produced by the authors in accordance with scientific research methods and academic ethical principles.

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