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BECID

Systematic Literature Reviews On The State Of The Art On Disinformation

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INTRODUCTION

This deliverable aims to capture work done in **T3.1** for the BECID hub, as to provide information about all the relevant academic research literature available in the field related to fact-checking epistemologies and practices and reception and intervention studies pertaining to fact-checking and information disorders. However, the original plans have been exceeded multiple times, and in addition to a report, we will also publish in scientific journals – the research gaps detected provide valuable insight for our colleagues around the EDMO network as well as outside of it.

To achieve this goal, the members of the consortium carried out a systematic literature review focusing on specific subsections of the EDMO BECID project that are of higher importance:

1. The BECID hub studies societal resilience, vulnerability and risk awareness topics. In particular, how to evaluate and measure such developments within the society. Considering the above, a research group in WP 3.1. set out to explore how this topic has been covered in relevant research literature. An answer to the following research question: “What research methodologies allow us to describe this distinct area of research?”
2. Presumably, all three Baltic countries already have cultures of resilience, as the societal pressure to cope with disinformation has been there since the late 2000s. There is a lack of systematic knowledge of what has been done in this respect among BECID stakeholders (i.e. all three Baltic countries). Therefore, a separate group of researchers is working on WP 3.1. they have delved into what has already been published in academic literature and various national documents (reports, policy documents) compiled by different public institutions.
3. There seems to be a general lack of knowledge concerning the important topics studied in fact-checking research areas. What are the criteria of categorisation that describe this field of research? Also – what recommendations can be made based on the thematic/topical and research categorisation criteria to improve the research in fact-checking?
Concerning the previous point, there is an angle worth paying attention to separately: what kind of audience-aimed interventions are there in addressing information disorders? To what extent did the audience members attribute agency in setting the agenda for the intervention? And what kind of audience-aimed interventions are considered successful? If yes, what makes an intervention successful?
4. Clearly, teaching media literacy in school is an interdisciplinary objective. Therefore, it seems essential to address the scientific argumentation for teaching media literacy from a multidisciplinary perspective, including different focuses on methodologies. Also, there appears to be a vital sub-task to map other use cases for teaching ML from an interdisciplinary perspective.
5. Fact-checking and information verification are significant components of media literacy. Teaching media literacy in school is an interdisciplinary objective. Therefore,

addressing the scientific argumentation for teaching media literacy from a multidisciplinary perspective is crucial, including different focuses on methodologies. Also, it is essential to map other use cases for teaching MILs from an interdisciplinary perspective.

While the output of this work will be reported describing the current research in the focus areas identified through the questions, the participants also agreed to continue the work on publishing the results in an academic literature review format. This will allow the results of our project to be presented to a broader audience.

All the reporting in the framework of **T3.1** is done via systematically revising internationally recognised academic databases such as Scopus, Web of Science, EBSCO, and Google Scholar. As a principle, we did not rule out knowledge published outside the formal academic channels and formats that may include working papers, policy documents, expert reports, etc. However, in most cases, the queries were made with an academic focus, and we were most interested in peer-reviewed studies. What follows is a conceptual overview of the most important findings of the areas of inquiry listed above.

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1. Topics Studied In Fact-Checking Research

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Even though many scholarly publications on fact-checking started to emerge in databases starting from around 2010, the amount of studies on fact-checking exponentially increased during the Covid-19 pandemic. It impacted various social, ideological and well-being-related processes around the world and unleashed a wave of dis- and misinformation. These developments ushered several researchers to devote more attention to the pollution of information environments and examine the attempts to tackle them, which also included fact-checking.

As BECID follows the model of all EDMO hubs, connecting researchers and journalists, it is also clear that an overview of fact-checking research is necessary for both practitioners and academics. In the long run, such an overview helps provide more focused and up-to-date training for various target groups, since BECID continues partnerships with various stakeholders (e.g., journalists, media and information literacy facilitators, teachers, and librarians).

The response by the European Union to the changed information environment has also been additional regulation (e.g., the Digital Services Act and the European Media and Freedom Act aim to do so) as well as agreed-upon codes of conduct (e.g., the Code of Practice on Disinformation). This means that policy-makers also need to access the information. Finally, as fact-checking is being financed on a large scale by European institutions and the global social media platforms, the question of efficacy must have a central place in evidence-based discussions.

While the heightened attention to fact-checking is beneficial, it has turned out to be a challenge to get an explanatory overview of the field, as well as a clear understanding of potential research gaps that would facilitate further research. Fact-checking epistemology has been studied before (i.e., Uscinski and Butler, 2013; Nieminen and Rapeli, 2019). Nevertheless, the scope has not been wide enough, the research has not been accessible to non-academic stakeholders, and the results have not been contextualized in the post-infodemic information environment. Hence, a new literature review is in order.

We conducted a systematic literature review (SLR) in academic databases Web of Science, EBSCO and SCOPUS to look for fact-checking research published in English-language academic journals between 2010 and 2023. As we discovered doing the pilot searches, surveying the field of fact-checking is challenging due to the diversity of the term's use and the terminological confusion in the field. Searching only for "fact-checking" and "journalism"

or “media” will return thousands of hits, and the biases of search engines in combination with browser data may distort the integrity of the retrieved corpus of articles, as Agin and Karlsson (2021) encountered. Furthermore, depending on the discipline, a variety of terminology is used: debunking, prebunking, information and news verification all tend to describe the same process, whilst the term fact-checking can also be encountered in journalism studies to describe the work done prior to publishing a news article.

Taking all of that into account, the final syntax included 12 keywords (debunk, prebunk, epistemology, journalism, media, disinformation, user, misinformation, news verification, tools, fake news) combined with “fact-check*”. This brought 1,116 results on Web of Science, 3,803 on EBSCO, and 1,054 on Scopus. 4616 articles were uploaded to Rayyan, customisable software for SLR-s, with 49 duplicates detected and then deleted by the software automatically, and 2,867 duplicates with less than a 100% duplication rate inspected and then manually deleted. The remaining 1,749 articles were subjected to two rounds of reviews by different team members, designed as a control mechanism and another revenue for inductive labeling of themes and topics.

The preliminary results indicate yet again that the domain of fact-checking research has multiple faces that are not always opening up easily. The previous studies cover **diverse geographic areas**, which include Europe, North and Latin America, and South-East Asia. In addition to media, journalism and communication studies, we encounter explorations of fact-checking-related issues in journals dedicated to medical science and healthcare, political science, computer science, information science, etc. This inter-disciplinary interest illustrates the breadth of the attention paid to this concept.

After the ideas or **ideals of fact-checking** are first declared in many earlier publications, the **reality is being put under scrutiny**, and some other of the aspects which the previous studies have looked into include the following: the actual infrastructure where fact-checking takes place; the practices of fact-checkers and their perception of fact-checking; the actual perception of audiences of disinformation or fact-checking, and the existing tools for fact-checking. An interesting trend to note is the **use of regional or topical fact-checks as a sample by researchers to map or analyze disinformation narratives**, which makes the quality of published fact-checks even more important.

Practitioners interested in applying the latest innovations from fact-checking studies might benefit from the studies that address **the effectiveness of fact-checking**: what works when combating disinformation, and conversely, what does not, and also, what are the aspects supporting or hindering fact-checking on a macro-level. Although few studies utilize such explicit keywords as “effectiveness” or “macro-level”, insights into this can indeed be found in the articles. **No scientific consensus** on whether fact-checks change someone’s mind seem to exist as of yet, as some research considers **the target group for fact-checks** are people who go to search engines for extra information and others consider the target group to be the people deepest in conspiracy echo chambers. Depending on whom is seen as the audience, the purpose of conducting the fact-check also differs.

A minority of the studies explicitly addresses the topic of fact-checking in the **context of media literacy** – typically, as part of some training, and as a necessary “survival skill” in the technology-rich information environment. In media literacy related research, fact-check articles or toolboxes for fact-checkers were used as tools to teach information verification. **Automatisation** of different parts of the information verification process is a popular topic of research. An overwhelming body of research and experiments focus on using different classifiers to make automated models work, but **there is a clear gap on who, for what, and how often would actually use those automated tools and toolboxes.**

2. Tools Used By Fact-Checkers

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The aim of this report is to give a brief overview about fact-checking and introduce the audience to the fact-checking tools used by fact-checkers on the Baltic level. The insights are based on academic literature as well as insights given by fact-checkers during the project.

Understanding The Work Of Fact-Checkers

According to the Cambridge Dictionary¹, fact-checking is the process of checking that all the facts in a piece of writing, a news article, a speech, etc. are correct.

Traditionally, fact-checking has been taking place in media outlets for making sure factual information (dates, names etc) has been correct, but the field of fact-checking has been developed from editor-led journalism to citizen-led journalism².

The NATO StratCom COE report³ states that fact-checking is usually done by journalists and political analysts, but the activity has extended to organizations like universities and non-profits, to funded projects. The fact-checkers have also seen the power of communities in sharing knowledge⁴. This can be empowering for the fact-checkers. In addition, the social media companies have also shown interest towards working together with fact-checkers to tackle false information being shared on their platforms⁵. Moreover, co-operation amongst regulatory services and relevant parties on the European Union level is adding importance to the topic as the European Commission encourages organizations to sign up as signatories.⁶

Based on the webinar where fact-checkers in the Baltics have shared their practices and areas in need of development.

Drives Of Using Innovative Approaches

The development of AI. The field of fact-checking has also expanded due to the development of fake material being produced that is mixed with factually correct information. Considering the need to process a great amount of information in a short time, with the development of Artificial intelligence, the AI tools can also empower fact-checkers⁷. For example, a video can

be taken apart into text and image material that can be then processed into smaller keywords and content found on the image. Therefore, these automated tools can assist human fact-checkers with certain tasks like identification and verification of information.

The legal obligations of social media platforms. With the DSA becoming legally binding⁸, the platforms are required to be more transparent and responsible with the content provided on the platforms.

Areas of improvement

Based on the webinar where fact-checkers in the Baltics have shared their practices and areas in need of development, the experts have highlighted the following points:

All country representatives agree that collaboration in the fact-checking area is important. Fact-checking expert from Lithuania sees fact-checking as a collective activity. The fact-checking representative from Latvia has highlighted collaboration inside of their organization while the representative of Estonia sees their priority in finding new ways to reach their target audience with innovative content and self-development of the experts. Representatives of Estonia and Latvia have also raised the importance of collaboration across the Baltics to consult and share knowledge about what narratives are spreading in the information space.

Overview Of The Tools Fact-Checkers Use In The Baltics

The names of the tools and possible uses were gathered from fact-checkers on the Baltic level through semi-structured interviews by the BECID team. The tools were compared based on their functionality, what kind of an application was it, if the tool needed authentication and the cost of the tool. In addition, possible use cases were elaborated on.

Tools	Available for public	Functionality	Possible uses
Reverse image (by Google)	yes	A tool that helps to discover visually similar images	To check the authenticity of an image
InVid	yes	A toolkit that assists fact-checking through video verification	To check the authenticity of a video clip

Crowdtangle (by Meta)	yes	A content discovery and social monitoring platform	To understand how content spread in social media
Versus (by IRI)	no	A monitoring tool that is a specialized search engine that follows the media in select countries and is able to visualize it with graphs	to research disinfo narratives (where a particular idea or claim has (re)appeared and how it has spread and developed)
Debunk.eu-s tool	no	A media monitoring tool, which includes pre-selected disinfo/propaganda media sources and	to produce reports on what's topical in this information space during a period of time

Comparison In Detail For Public Tools

Tool	Type of an application	Authentication needed	Cost
Reverse Image	Web application	no	free
InVid	Desktop application and a web plugin	yes	free
CrowTangle	Web application	yes	free, but only available for specific partners

3. Mitigating (Dis)information Vulnerability With Situational Risk Awareness And Human-Centered Approaches: A Conceptual Model

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Summary

This analysis delves into the concept of **(dis)information vulnerability**, outlining the determining factors according to which individuals and groups are susceptible to the detrimental consequences of the supremacy of online manipulations.

Defining the concept of “(dis)information vulnerability” is a challenging matter because of its multi-dimensionality and particularity, which depend on individual characteristics and contextual conditions. Hence, this paper integrates **human-centred aspects of information processing** by incorporating individual (socio-demographic characteristics, such as age and education) along with socio-psychological capacities like self-efficacy assessments and values, which become particularly crucial in decision-making situations that are prone to conflicts and disagreements. Additionally, the approach incorporates **socio-structural and situational features** prevalent in contemporary media and communications.

The starting point here, specifically, is based on the notion that information manipulations are significantly influenced by digital technology and information accessibility, but, most importantly, also by national contextual specificities, namely the socio-cultural values and traditions in information provision and use. Among those are the defining characteristics of agenda setting and representations within the media, but, most importantly, individual factors, such as individual accessibility to media and digital skills, as well as socio-psychological aspects, including various (cognitive) biases, media awareness and related factors of moral reasoning in decisions making and information processing.

In this context, **universalist policy-making** requires heightened sensitivity and awareness of the risks associated with the spread of manipulative content and individual actor responses to dysfunctional communication situations. It is important to consider that although (dis)information vulnerability has become a part of the media policy debate, it nevertheless remains a domain of expert knowledge. Solutions are generated by taking a perspective “from above”, such as proposing media literacy programs or advancing fact-checking by media organisations. Despite these efforts, there is insufficient knowledge and a lack of evidence-based understanding about the scope of effects of detrimental content on **people’s reasoning**, thereby influencing societal integrity. Thus, the emphasis lies in assessing conceptual definitions and research findings that illuminate the risks of (dis)information

vulnerability. In the end, a conceptual model is proposed, which integrates all these critical aspects.

Introduction And Background

Despite the numerous scholarly attempts to clarify the fuzziness of the concept of **disruptive communication** (for some best examples of conceptual structurations of disinformation harm, see, for example, Wardle & Derakshan, 2017), also the variety of responses to combat it – ranging from structural cybersecurity solutions and legal protection systems on a governmental level to fact-checking and media literacy efforts implemented by various non-governmental organisations – there are still quite a few unanswered questions (Frau-Meigs, 2022).

The most important ones pertain to the necessary shift from responsive and reactionary to more active **disinformation risk awareness** raising via strategic policymaking moves as well as practical educational trainings and interventions. As anticipated, these moves would enhance the democratic epistemic capacities of the public, fostering the ability to employ effective strategies for distinguishing truth from falsifications (Gunn & Lynch, 2021). This, in turn, would enhance the resilience to digital information disruptions.

Alongside these efforts and responses, the issue defined as “(dis)information vulnerability” emerges as a major focal point of attention in developing societal resilience. Additionally, beyond the selection and analysis of the scope of disinformation, the emphasis on vulnerability aims to explore **socio-psychological aspects** that are anticipated to play a significant role in rebuilding trust, both in institutions and among fellow citizens, thereby ensuring societal integrity and resilience.

In response to the growing need to combat online disinformation, media literacy, fact-checking and platform governance initiatives are advocated by European institutions and collaborative initiatives, such as European Digital Media Observatory (EDMO)¹, as well as national and regional Hubs, as the necessary means to the development of epistemic resilience and sustainable risk awareness among all stakeholders. These efforts hold significant importance in terms of mobilisation and sharing of expertise in governance actions, fact-checking, research innovations and media education on transnational, regional and local levels.

¹ The European Digital Media Observatory (EDMO, <https://edmo.eu>) brings together fact-checkers, media literacy experts, and academic researchers to understand and analyse disinformation in collaboration with media organisations, online platforms and media literacy practitioners.

Still, what seems lacking is not just a more precise awareness of the disinformation problem's scope or variety of responses to it (DIGIRES, 2022). Manipulative communication has always been present, but there is limited awareness about (dis)information vulnerability, i.e., the determining factors and the extent to which **individual information processing and public opinion formation processes** might be affected by changing communication conditions and strategic communicative aims and how people's trust in institutions and fellow citizens might be shattered.

Disinformation And Vulnerability As Contested Notions

To begin with, online disinformation calls to be defined as a wicked problem that is intricate, conflicting, and linked with difficulties rooted in rapidly changing environments. Wicked problems refer to a myriad of problem types, including environmental disasters, health risks, and social conflicts. These types of problems are characterised by high complexity and the absence of precise definitions. Online disinformation, too, can be defined as a “wicked problem” because of its deceptive nature that is inherently marked by significant ambiguity (Montgomery, 2020).

Formulating national policies to address such multifaceted problems and provide adequate solutions requires a holistic understanding of socio-structural factors. In the case of online disinformation and information-related manipulations, such communications condition is determined by the specificities of the national information ecosystem, which nowadays is characterised as a convergent, hybrid and transmedial communications environment (Chadwick, 2013; Jenkins, 2003; Jenkins, 2006; Hancox & Klæbe, 2017). The “transmedial” characteristics signify variations in both infrastructure and content within a hybrid news ecosystem, encompassing both conventional news media as well as alternative channels. In addition to these factors, there is a wide range of stakeholders seeking communication-based solutions. Taking all these factors (infrastructural diversity, content multidimensionality, variations of interests among the communicating actors) into account, it seems plausible to contend that addressing online disinformation as a wicked problem cannot be approached with a single definitive problem definition leading to one successful solution.

When dealing with disinformation, in most cases, the focus is on fostering societal resilience as a desirable outcome (Apostol et al., 2022; Garrand, 2022), around which all solutions aimed at mitigating disinformation should revolve. On the other hand, “resilience” itself is a multidimensional concept and dynamic characteristic, which refers to an ambiguous social state on societal, organisational and individual (or group) levels and thus lacks a clear-cut definition (DIGIRES, 2022).

Given these complexities, an understanding evolves that all societal reactions to online (dis)information, along with susceptibility to manipulations and related vulnerabilities of decision-making in disruptive situations, should be examined within the context of **information processing within dysfunctional communication and the resultant societal conflicts**.

In such a view, it looks like (dis)information vulnerabilities arise on the basis of communication responses rooted in **(a) individual socio-demographic and socio-structurally-shaped** inequalities (determined by age, education and social capital, but also structural economic factors) and are highly influenced by **(b) situational factors** typical to specific national context and communication cultures.

A few additional words must be said in relation to situationally-determined topics and communication features. As revealed in various analyses (Juurvee & Arold, 2021; Kapantai et al., 2021; Lewandowsky & Van Der Linden, 2021), the spread of controversies and detrimental content, including hatred, supremacism, Islamophobia, racism, or misogyny (Vériter et al., 2020), goes hand in hand with the spread of misinformation, generating conflicts and accelerating disagreements. When reinforced through the effect of echo chambers, in most cases, these already established and deeply seated radical beliefs and national conflicts are becoming even more digitally visible and dangerous (Nguyen, 2020; Bjola & Papadakis, 2021; Di Mascio et al., 2021).

Briefly, the available research findings suggest that communication-related conflicts, disagreements, dilemmas and critical issues, as well as social narratives surrounding them, are intricately intertwined with the cultural and contextual aspects unique to each country (Bennett & Livingston, 2020; Kreiss, 2021). It seems plausible that the formation of conflicting views is influenced by enduring and unresolved societal struggles revolving around developmental histories, social upheavals, individual losses, and cultural traditions specific to each geographic, cultural, and socio-psychological context. Therefore, the analysis of vulnerabilities should be highly nuanced and sensitive to the specificities of both individual and contextual conditions.

Available examinations of “disinformation vulnerability” reveal a broad spectrum of adverse effects of disinformation on democratic institutions, national security, public health, economic stability, technological issues, overall societal well-being, and more. In analyses focused on disinformation threats to democracy, vulnerability is discussed as the risks of election manipulation by internal and external malignant actors (Kapantai et al., 2021; Lee, 2018; Shackelford et al., 2020; Vériter et al., 2020), utilisation of specific disinformation to enforce attacks against the legitimacy of social and political institutions, (Claudia, 2022; Di Mascio et al., 2021; Lewandowsky & Van Der Linden, 2021; Rodríguez-Pérez & Canel, 2023; Jerónimo & Esparza, 2022), as well as the rise of populist movements whose claims are reinforced in such an environment (Di Mascio et al., 2021; Tripodi et al., 2023). Through these actions, institutional trust is not the only thing that is affected. Due to the fact that polarisation leads to radicalisation and extremism, a direct national security challenge is posed by disinformation.

In conclusion, situations linked with communication and opinion formation become highly sensitive and are exploited by foreign and local agents to magnify political populism. Consequently, this fuels polarisation and social fragmentation, affecting **societal integrity** (Manwaring & Holloway, 2023).

As previously noted, the commonly identified adverse effect of disinformation is a decrease in social and institutional trust and the crisis of people's willingness to believe in facts. Because of respect for human rights and having narrower opportunities to legitimately deal with disinformation in cases related to beliefs and trust, democracies appear especially vulnerable to information attacks (Shadmy, 2022).

The experiences of recent years have demonstrated that achieving a balance between implementing regulatory measures and assuring citizens' communication and information rights in a changing information environment is a delicate task (Ala-Fossi et al., 2019; Balčytienė & Horowitz, 2023a). As illustratively explained in a comprehensive overview done by Bjola & Papadakis (2021) on the case of Finland, information manipulation harms the epistemological basis for truth-claim validation, which causes intensification of affective responses, empowers destructive counterpublics and reinforces the challenges towards multiculturalism and diversity.

With this perspective in mind, we contend that a national country's responses to the influx of disinformation and dysfunctional communication should be examined not only through structural measures such as available policy initiatives and governance decisions made or the number of education programs applied. Instead, developing strategies to combat disinformation should be treated as a socio-political and socio-cultural process on its own that involves the development of required awareness of arising vulnerabilities (DIGIRES, 2022).

Furthermore, for all those efforts to be successful and reach the aim of building **information inclusiveness and resilience** in contemporary societies, the spirit of sharing and co-creation must be complemented with an additional ideal of inclusiveness and dialogue (Balčytienė, 2023).

Risk Awareness

As mentioned earlier, we are dealing with intricate phenomena defined by scholarly concepts, each laden with diverse perceptions and meanings shaped by different decision-makers. Responses to a shifting social reality often reference socio-structural factors, societal resilience, public actions and more, which have found applications in policymaking and public discourse.

Since decision-making and information-processing are socio-psychological and socio-cultural processes that are sensitive to values and communication traditions relevant to a

national context, as well as a country's geo-political location and memory politics², it is justified to think that such variations across countries will also be evident in strategic thinking and policymaking.

In the broadest terms, risk awareness in relation to information disorders, such as disinformation and misinformation, is perceived as a **horizontal strategy** that encompasses a holistic approach with several dimensions, such as policy-making, fact-checking, and media education. The approach applied in different analyses leans towards relying on the examination of structural-level characteristics (see, for example, Humprecht et al., 2020; 2021) or individual capacities (McDougall, 2019; Jolls, 2022) that are required to adequately respond and minimise the detrimental effects of disinformation.

In our analysis, we focus on and contend that a designated level of risk awareness and risk perception in a country is evidenced by strategic policymaking and the development of longer-term strategies to combat arising **inequalities and digital information vulnerability**.

The most common argumentation in scholarly writings rests on the idea that the resilience of societies and groups can be improved if risk awareness is institutionalised in policymaking and everyday practice. To achieve such an integrated practice, adequate situational awareness and risk perception is required at all social levels, including macro, mezzo, and micro levels (Balčytienė & Horowitz, 2023b; Balčytienė & Imbrasaitė, 2023). However, there are results provided revealing critically significant structural and organisational capacities of the media environment, such as the economic viability and trust in public service media (see, for example, Humprecht et al., 2020, 2021). Still, a human-centred approach has been overlooked in these comparative studies. In particular, finding adequate risk management solutions that take into account people's readiness, willingness and capacity for informed reaction to disinformation has been insufficient.

By advocating for our approach, we endorse the idea that information-related risks and crises are not solely linked to physical phenomena, such as digitally accelerated communication and overabundance of (dis)information. Instead, these risks reflect connections to the evolution of people's epistemic capacities of media awareness, which is influenced by agentive features, such as information processing strategies, cultural and social traditions, and psychological factors (Harambam, 2021).

Therefore, it is necessary to broaden the conceptualisation of "disinformation vulnerability" to incorporate new aspects of both the digital media environment and individual reactions. In other words, we argue that the understanding of individual (dis)information vulnerability

² Cultural and contextual aspects of communications cultures are eloquently described in Hallin and Mancini (2004, 2012), Gross (2023), Balčytienė (2012).

should not be restricted to those factors traditionally viewed as segregating, such as socio-economic disparities like age, gender, years spent in education, and income. Additional factors must be considered to define **communicatively structured inequalities**.

Digitally Managed Exploitations

As a complex and multifaceted issue, disinformation and the risks it generates are so pervasive that no one can fully consider themselves entirely immune to its detrimental effects (DIGIRES, 2022).

Likewise, it must be acknowledged that the specific concept of vulnerability, frequently explored in research on responses to risk situations and disinformation as well, must be examined in combination with the concept of resilience. Its particular aspect, defined as “informational vulnerability”, refers to an individual state that emerges in response to information disruptions. National (or societal) resilience to information disruptions, on the other hand, evolves over time, with different factors contributing to its final outcome, among which individual information capabilities (digital skills and media accessibility) and assessments of self-efficacy are among the predominant ones (Bandura, 2006; Huurne & Gutteling, 2009).

As mentioned earlier, disinformation often exploits prevailing societal divisions and conflicts. When confronted with conflicting narratives and generally dysfunctional communication, individuals tend to respond by relying on their biases and prejudices that confirm their pre-existing beliefs, thus further deepening divisions and increasing suspicions. As a result, trust declines, leading to societal disintegration, which exacerbates conflicts (Huurne & Gutteling, 2009).

Improving the resilience of people and communities is intricately linked to understanding the conditions that contribute to vulnerability. Therefore, a number of questions call to be addressed in such a context, namely:

- Which issues should be taken into account in analysing the determining factors of individual and social vulnerabilities to (dis)information, and how these should be taken into account in drafting policies for resilience capacities development?
- How should vulnerable groups be defined?
- How comparative cross-country analyses of vulnerability can inform national policies in terms of common practices and nationally/culturally specific characteristics of resilience development?

In traditional sociological terms, **vulnerability** refers to distinct material or cultural features of a social group that might make them susceptible to exploitation, leading to **inequality**. The sociological perspective on vulnerability refers to different risk factors leading to **injustice** (Limantė & Tereškinas, 2022). Furthermore, vulnerability is socially constructed and is

dependent on **power relations** existing in concrete social communications context. For example, in a digital communications environment, arising digitally shaped inequalities highlight the unequal distribution of digital (dis)advantages, such as information accessibility and reach (Nieminen, 2019; Ala-Fossi et al., 2019) and digital platforms infused media representations (i.e., online visibility), resulting in different levels of provided attention that results in different power arrangements between communications actors (Helberger, 2020).

As known, social conditions for information vulnerability tend to be most severe in undemocratic societies and communities, where legal rights are limited, unevenly distributed, or where the rule of law is not respected. In other words, vulnerability is often connected to socially underprivileged groups: non-citizens, the disabled, the elderly, the poor, etc. In online environments, demographic characteristics like age, education, and social status may play a role in conditioning vulnerability to information disorders, including specific types like conspiracy theories, fake news, and rumours.

For example, as for the age dimension, research studies tend to have a consensus that older people are more vulnerable to information disorders, including disinformation (Boulianne et al., 2022; Claudia, 2022; Golob et al., 2021; Miyamoto, 2021; Rodríguez-Pérez & Canel, 2023); yet it is recognised that young people have their own challenges, largely associated with the extensive use of digital technologies (Miyamoto, 2021; Monteiro et al., 2022). Also, education has some positive effects (Golob et al., 2021; Rodríguez-Pérez & Canel, 2023), though it is not always decisive (Boulianne et al., 2022; Claudia, 2022). On the other hand, a higher income is often mentioned as a factor that favours resilience.

As for the gender question, there are very different findings among scholars. Boulianne et al. (2022) argue that “being female is rarely significant as a factor in predicting awareness of, exposure to, and sharing of misinformation”, while the article by Rodríguez-Pérez & Canel (2023) states that women have less resilience to disinformation, which, according to their own commentary, contradicts other studies (Golob et al., 2021; Humprecht et al., 2021). One of the potential explanations may be conveyed from the Golob et al. (2021) study, where the authors elaborate that while having higher meta-reflexivity, women may have fewer opportunities to additionally check media content due to being more distracted in domestic spaces.

All in all, the identification of vulnerabilities is selective in all societies, yet it is unlikely that any polity could free itself of vulnerabilities. It is important to consider that “vulnerability” is a dynamic and contested notion. Any individual or group can become vulnerable depending on several key determining factors, including **individual and socio-structural as well as situational features**.

In summary, in the realm of a digital communication environment, society, its individuals, and groups may experience disinformation vulnerability stemming from their restricted control of (a) overarching structural conditions (macro level), (b) digital media representations and portrayals, (mezzo level), and (c) their agentic features as well as communication rights and digital capacities at the micro level (Frischlich & Humprecht, 2021; DIGIRES, 2022). On an individual level, in addition to communication rights, these capacities include specific aspects, such as physical or mental health, legal status, access to services and recognition.

Hence, (dis)information-based online exploitations might take on different forms, such as promotions of social and institutional distrust, advertising of populism and conspiratorial thinking, which can result in the deprivation of certain quality information resources or fundamental rights among these vulnerable groups.

In all these situations, “communicatively structured inequalities” or “digital information vulnerabilities” might be **directly exploited** with manipulative attacks, specifically constructed false narratives, and disinformation, leading to detrimental outcomes, such as manipulations in political opinion formation during elections, a decrease in trust in intuitions and fellow citizens, and more. In hybrid and transmedial information environments, receptive to different power configurations where authority rests in the hands of those who shape, manipulate, and direct information flows to align with their objectives, susceptibility to disinformation is a primary concern to policymakers and educators. One specific reason for that is that the influence of online (dis)information extends to modifying, facilitating, and impeding the power, particularly on those individuals and groups who lack attention or information proficiency.

Communicatively Structured Inequalities

In the broadest terms, constructive politics is defined as the pursuit of achieving a rationally motivated consensus, which, while challenging an ideal of deliberation in contemporary transmedial environments with manipulative content, remains an aspiration in the development of (constructive) communication (see also Steenbergen et al. 2003).

To address the very broad challenge of currently dominating dysfunctional communication, much more focused scholarly attention towards human-actions-centred awareness that employs both critical reasoning and moral aspects and runs on agentic features of the meaning-making processes is required.

As already noted, discussions on societal resilience often center around the entirety of “capacities”, which is broadly defined as the individual sense of empowerment and its epistemic and affective aspects, enabling individuals to respond to potential threats and harms (Hall & Lamont, 2013). Practising such capacity in a political news environment requires individual (political) agency (Hendrickx, 2022; Marin & Copeland, 2022; Hofmann, 2019). Empirical research on communication rights is especially informative and demonstrates that structural constraints within a society might limit such individual agentic

sense, intentions, and actions (Ala-Fossi et al., 2019). These constraints may appear in the form of restricted access to news and political information, a deficiency in digital skills leading to ineffective participation in dialogic communication, and a lack of diversity in the representation of views, among other issues. Furthermore, what is crucial in digital environments is the algorithmic logic of information structuration and predetermined ways to access and use information. Thus, it should be considered that in digital environments, additional structural constraints, including factors such as time spent online as well as digital skills, which may influence human capacity to respond to potential (digital safety) threats, must be considered (see, for example, Coeckelbergh, 2022).

In the most general terms, human agency is defined as a collection of capabilities (Bandura, 2006) to address practical conditions that emerge from an individual's interaction with (mediated) reality. For example, in digitally mediated confrontations with content, such as accessing information on social networks, the agentic aspect of mental actions is dependent on the association between motivation and knowledge (arousal and other reactions), on the one hand, and changing media conditions, on the other. Besides, human capacities are instigated and driven by differing socio-psychological norms: just the mere fact that an agent's act is based on false belief does not constitutively impair his or her ability to make decisions and act (O'Brien & Soteriou, 2009). Furthermore, if we contend that agency is defined by the capacity to consciously make decisions based on one's own judgments, beliefs, and values and to respond to practical situations, then it is critically significant to assess how people reflect on such an individual awareness-related capacity (Booker, 2021; Steinert et al., 2022). In other words, do people feel empowered by the surrounding reality and motivated to participate and act, or, on the contrary, do they feel deprived?

Taking these matters into account, we introduce the concept of “communicatively structured inequalities” or “digital information vulnerabilities”, which arise on the **basis of inequalities** in two broad areas of factors, including (a) socio-demographic-economic characteristics and (b) the socio-political profiles and capacities of individuals (see Figure 1).

In relation to our analysis, **socio-demographic characteristics** unveil individual features, encompassing aspects such as age, years of completed education, profession, place of living and others. The classical analysis of vulnerability and social exclusion regards these features as factors of injustice and exclusion that hinder individual freedom and emancipation of individual autonomy. On the contrary, **agentic features, such as socio-psychological-political factors**, are interconnected with individual **self-efficacy**: these features are primarily rooted in various aspects of individual awareness stemming from communication traditions and values, media usage and expression of trust. In this regard, vulnerability arises in response to individual self-efficacy and social trust variations.

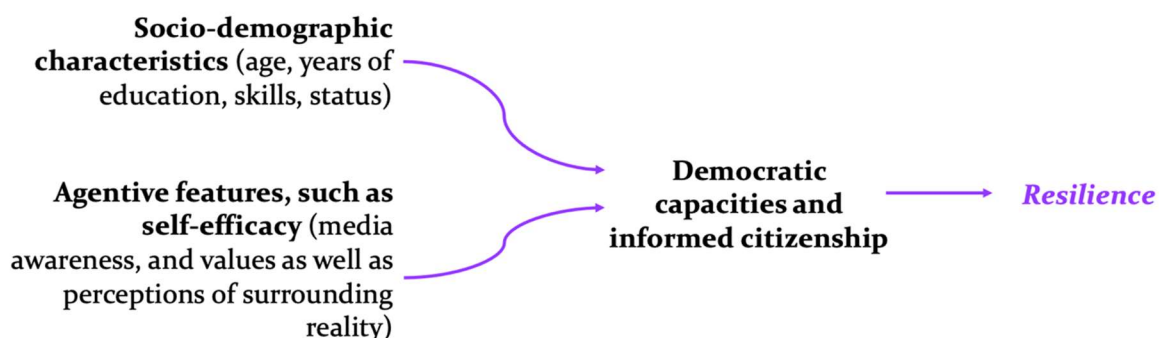


Figure 1. Communicatively structured inequalities and their relation to democratic capacities required for informed citizenship, which drives civic resilience.

In this conceptual framework centered on individual agency, autonomy manifests when individuals possess conscious ability (awareness) to actively shape their own lives (see Figure 2). Likewise, self-construction within a (mass networked or interpersonal) communication defines the connection between communication and autonomy, as individuals acquire capacities that enable them to assume the role of a “subject”. However, to make independent decisions and choose ethically valid options in the (digital) public realm, awareness must come before action-making, enabling an understanding of the consequences associated with (online) choices.

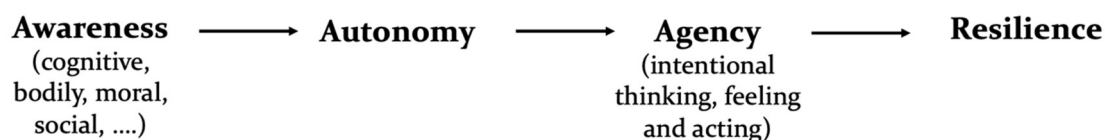


Figure 2. The interplay between awareness, autonomy and agency factors.

In typical communication situations, individuals often rely on automatic decision-making. As widely recognised, automaticity is susceptible to various cognitive biases that lead to various decision-making failures. Hence, developing democratic capacities in addition to democratic skills is necessary to achieve a mode of thoughtful, informed, and intentional decision-making that positively influences effective communications and dialogue.

In this scenario, **societal and civic resilience** represents an enhanced, autonomous, and well-informed ability to confront and influence change. This capability relies on both individual and societal structures facilitated by social groups and a functional and diverse media system. In a general sense, “civic resilience” encompasses a broader idea of “informed citizenship”, signifying a collective capability of society, the national media landscape, and individuals to withstand information disorders.

In conclusion, the schematic model designed here is constructed on the foundational idea that individual democratic capacities of the public should evolve to align with the complexities of (digital) communications infrastructures as well as the changing information ecosystems. Therefore, in addition to promoting ideas of critical thinking (which is a common theme in all media literacy-related policies and education programs), there is a need to raise and foster individual awareness of “effective communication” practices along with a practical culture of engaging in dialogic communication.

Discussion And Conclusion

There is no single answer to what makes some societies more resilient than others and which strategies in countering disinformation work best in which geographic and cultural context.

Building resilience to disinformation by promoting institutional transparency and accountability and strengthening people's political engagement and media literacy capacities are important steps in mitigating the impact of disinformation on societal trust. Still, what needs to be taken into account is the fact that democracies with lower degrees of institutional and interpersonal trust appear especially vulnerable (Balčytienė, 2021) in situations of heightened uncertainty and might be more prone to populist manipulations (Ramonaitė, 2023). Nevertheless, even in more mature democracies, with high levels of institutional trust, press freedom, and media literacy, online disinformation poses challenges to national security and societal coherence (Aslama-Horowitz et al., 2021).

Public perceptions and responses to risk are subjective. Therefore, it is crucial to adopt a multidisciplinary research approach to individual and group response analysis to the implications of manipulative content and dysfunctional communication. By examining the socio-economic factors behind related digital information vulnerabilities, one can find solutions for information-linked inequalities, such as variations in digital skills, distrust in institutions, growing support for political populism and similar expressions. On the one hand, policy responses promoting inclusive communication and communication rights must be put forward. In addition, these responses should be empowered with practical guidelines for ethical communication. But, beyond strategic policy thinking and risk awareness, a comprehensive framework of engaging interventions by different public and private actors needs to be pursued.

Hence, in addition to identifying vulnerable groups, the proposed conceptual framework aims to establish new networks and reinforce existing levels of **collaboration** and networking between state and business organisations, media, creative industries, civil society groups and the general public, all working to safeguard the right to reliable information. Hence, a significant issue in this context is tied to **actor inclusiveness and stakeholder cooperation**. Simultaneously, it is understood that the establishment of a **dialogic culture of communication** presents a challenge that numerous stakeholders are only now beginning to recognise (DIGIRES, 2022).

In summary, the democratic capacities of the public must evolve to align with the complexities of online communication environments and changing news ecosystems. This implies that, in addition to the promotion of critical thinking (which is a common theme in all media literacy policies), there is a need to raise and foster awareness of **accountable and responsible communication** practices along with a practical culture of engaging in dialogic communication.

The current crises in all societies are caused by complex and multiple factors, such as the enduring climate changes and environmental threats, followed by economic challenges and global migration, health risks and post-pandemic issues, Russian aggression and war in Ukraine, and related geopolitical challenges to security in Europe.

Additionally, there is a growing feeling of a rapidly approaching revolutionary **epistemic shift** that arises from accelerated digitalisation and technological AI innovations. It becomes crucial to elevate digital (media and information) literacy, along with critical thinking and related ethical decision-making actions, to the status of “meta power”. Such transformation ensures that knowledge and capacities of ethical reasoning must become a sustainable, democratic, resilience-oriented, and mutually empowering force, offering a decisive response to manipulations and attacks on human rights and democracy. This must become a force that grows “from below” – from actions of citizens of all age groups, expertise, professions, and social standings. A force for which space for development is created by structures and institutions “from above” – those of government, IT, media, education, and cultural services.

4. Conceptual And Methodological Approaches In Societal Resilience Research

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Introduction

This systematic literature review aimed to investigate public responses and capacities in coping with the increasing challenges and risks associated with disinformation and other media-related disorders. It is based on more than 150 articles published since 2010. The primary objective of this review was to understand how resilience to disinformation and other information disorders is conceptualised and operationalised in academic literature.

One central aspect of the study focuses on the conceptualisation of resilience. The studies define societal resilience against disinformation mainly as the social capacities,

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competencies, and resources available to individuals and different groups in society to recognise and counteract the harmful effects of disinformation.

Resilience to disinformation is defined as a state in which disinformation fails to reach a significant portion of citizens or, at the very least, is unsuccessful in persuading those who encounter it to disseminate it.

Research indicates that societal resilience and the capacity to cope with disinformation are specific to each country and highly dependent on the socio-political and information environment. These studies shed light on various factors, including structural conditions (networks, institutions, and discourses) on one hand and social actors' (individual capacities and agency) approach on the other. They also highlight sociocultural factors (values, knowledge, trust, and practices) and contextual factors (social, political, and economic conditions, institutional settings, and power relations).

The study explores vulnerabilities stemming from disinformation, spanning various domains such as democracy, security, public health, economics, and technology. Furthermore, the report delves into conditioning factors that impact vulnerability or resilience to disinformation. These factors include characteristics of information, the environment, and information recipients.

Research and policy studies included in the literature review illustrate providing evidence on the international, institutional, and both collective and individual awareness of the risks, including the ways and measures to cope with them.

The report examines the actors involved in bolstering resilience to disinformation, including policymakers, academia, media, civil society, businesses, and citizens. Cooperation among these actors is considered critical, especially in the absence of a lead agency responsible for countering disinformation. Malignant actors, which can encompass authoritarian states, political forces, media outlets, and unwitting contributors to disinformation, are also acknowledged.

The report discusses vulnerable groups, highlighting how demographics like age, education, and social status can condition vulnerability or resilience to information disorders. Finally, it introduces measures, interventions, and mitigation strategies for countering disinformation, which can be preventive, reactive, or proactive.

In terms of research methods, a wide range of approaches is employed in the study of disinformation, including case studies, surveys, interviews, experiments, focus groups, discourse analysis, content analysis, ethnographic observations, and stakeholder mapping. This diverse methodological toolkit allows for a comprehensive exploration of resilience to information disorders.

By presenting a wide range of research approaches, this review provides a comprehensive examination of resilience to information disorders across different dimensions, making it a resource for addressing the contemporary challenges of disinformation.

Search Protocol And Inclusion/Exclusion Criteria

The timeline for the search was set from 2010 to May 2023. Two separate searches were conducted to approach the issue from different angles - using the terms "resilience" and "vulnerability" (and related terms) in combination with specific keywords (see Annex 1).

The search was conducted among peer-reviewed articles in English within the Web of Science, Scopus, and EBSCO databases. During the search, articles from fields unrelated to social science were excluded (see Annex 2).

For the "**resilience**" search, a total of 9,035 articles were found in Web of Science, 6,124 in Scopus, and 12,312 in EBSCO. For EBSCO, the manual selection was further applied to include only articles related to the information and communication field within the context of media literacy, disinformation, and other forms of deviant information. This narrowed it down to 378 articles in the dataset. These 15,537 articles were uploaded to Rayyan, where automatic duplicate detection was applied with a threshold of 95% similarity. Subsequently, manual removal of duplicates resulted in 4,019 duplicates removed and the identification of 2 non-duplicates, leaving 11,518 articles for further analysis. Of these, 10,870 were deemed irrelevant to the topic of resilience to disinformation and other information disorders, leaving 226 articles for further study.

For the "**vulnerability**" search, a total of 8,012 articles were found in Web of Science, 7,041 in Scopus, and 20,721 in EBSCO. Similar to the resilience search, manual selection was applied for EBSCO to include only articles related to the information and communication field within the context of media literacy, disinformation, and other forms of deviant information, resulting in 109 articles in the dataset. These 15,162 articles were uploaded to Rayyan, where automatic duplicate detection was applied with a 95% similarity threshold. Manual removal of duplicates resulted in 4,007 duplicates removed and the identification of 2 non-duplicates, leaving 11,113 articles for further analysis. Of these, 10,834 were deemed irrelevant to the topic of resilience to disinformation and other information disorders, leaving 279 articles for further study.

In total, 505 articles were placed in the dataset, with 12 removed as duplicates (present in both the "resilience" and "vulnerability" datasets), 14 removed as they were not articles from peer-reviewed journals, and six removed for being in a language other than English. This resulted in **473** items that were subsequently studied by the research team.

Two scholars reviewed each article to make a decision, and if both independently decided to exclude it based on specific criteria, the article was excluded. Articles were further excluded based on specific criteria.:

- articles in economics and marketing (15)
- articles in natural science (2)
- articles on legislative topics not directly related to resilience to information disorders (7)
- articles on mental health issues not directly related to resilience to information disorders (46)
- articles on personal development and education not directly related to resilience to information disorders (48)
- articles on the ethics and philosophy not directly related to resilience to information disorders (12)
- articles on political and security topics not directly related to resilience to information disorders (59)
- articles on the social justice and social security issues not directly related to resilience to information disorders (28)
- articles on the technological issues not directly related to resilience to information disorders (25)
- articles with a relatively narrow focus: on the conspiracy theories (2), deep fakes (3), health care disinformation (27), journalism (13), libraries (2), scientific knowledge (4)

This resulted in **181 articles to be included in the literature review.**

Literature Organisation

To identify the methodological approach of the articles, we categorised them into two groups: empirical and non-empirical. Empirical articles employed one of the following methods:

1. Qualitative text analysis
2. Interviews
3. Content analysis
4. Surveys
5. Mixed methods design
6. Case study analysis
7. Literature review
8. Social media/network analysis
9. Scenario analysis
10. Computational methods

This list of approaches to the empirical material was compiled with consideration of methods commonly used in the social sciences and information and computer sciences. The classification of social science methods was based on Maares and Hanusch (2022), and additional methods were included in the list following the initial reading of the articles by coders.

To illustrate the scope of the treatment, we also coded the use of datasets, distinguishing between local/national and international comparative datasets. Additionally, we identified the context relevant to understanding the results, distinguishing between single-country studies and multi-country studies. This categorisation allowed us to determine which countries were analysed from the perspective of disinformation and societal resilience in the articles.

Analysis

Resilience in the context of information disorders has gained recognition as an essential concept in the realm of communication narratives. In the post-truth era, given the shared understanding among academics and policymakers that disinformation, much like a "biological" virus, may be challenging to eliminate, the concept of resilience towards it is likened to a form of "social immunity."

The first significant aspect of this study pertains to the conceptualisation of critical terms. When discussing disinformation in general, various related types of information disorders have been included in this study. As highlighted by Kapantai et al. (2021) in their literature review, there is a multitude of terms used in this context, including fake news, false news, misinformation, rumours, information pollution, and more. Disinformation, in their understanding, encompasses all forms of false, inaccurate, or misleading information that is intentionally created, presented, and promoted to cause harm to the public or for profit. They acknowledge that while some scholars use "disinformation" as a hypernym (Amazeen & Bucy, 2019), others propose that "information disorder" is a broader term (Wardle & Derekshan, 2017).

The list of information disorders also includes conspiracy theories (Lewandowsky & Van Der Linden, 2021; Vérter et al., 2020), psychological information operations (Mlejnková, 2022), and propaganda (Golob et al., 2021).

Wardle & Derekshan (2017, as cited by Kyza et al., 2020) also distinguish between misinformation, disinformation, and malinformation, a distinction supported by other scholars (Bjola & Papadakis, 2021; Di Mascio et al., 2021; Romanova et al., 2020). Misinformation refers to false information disseminated without an underlying intention to cause harm, while disinformation is characterised by a deliberate intent to do so. Malinformation is another type of information intended to cause harm while being genuine (Wardle & Derekshan, 2017, as cited by Kyza et al., 2020).

Some studies in the field of disinformation specifically address the risks associated with the online/digital environment (Bjola & Papadakis, 2021; Delgado et al., 2022; Kyza et al., 2020; Lee, 2018). However, the purpose of this review was not limited to that context.

Resilience to disinformation can be defined as a state in which disinformation fails to reach a large number of citizens or, at the very least, compels those who encounter it to refrain from further dissemination (Humprecht et al., 2020) or as an asset represented by an awareness

of disinformation's impact and the ability to identify it (Rodríguez-Pérez & Canel, 2023). Scholars discuss societal resilience against the threat of disinformation as a collective national resource rooted in the attitudes and behaviours of individuals (Rodríguez-Pérez & Canel, 2023). In the context of modern information warfare, individuals influence each other, shaping the dynamics of resilience (Mlejnková, 2022). This resilience is a product of ongoing discourse and communicative interactions, representing a collective phenomenon rather than an isolated individual one (Buzzanell, 2010).

Humprecht's model elucidating resilience against online disinformation (2020), offering insights into cross-national variations in disinformation exposure and associated responses, has gained recognition among contemporary scholars and is referenced in numerous academic works. The model presents a set of indicators encompassing factors such as the prevalence of populism, degrees of polarisation, media trust, the robustness of public broadcasting, shared media environments, media market size, and social media news consumption. These indicators are of particular interest and will be included in the broader taxonomy of potential resilience indicators against disinformation. It is important to note that while these indicators are valuable, they are not exhaustive, and a comprehensive examination of additional factors remains relevant.

Vulnerabilities

Resilience to information disorders has far-reaching implications across various fields of knowledge. Articles and literature reviews explore the detrimental effects of disinformation on democracy, security, public health, economic stability, technological issues, and more.

In the context of democracy, the threats posed by disinformation are discussed, including the risks of election manipulation by internal and external malignant actors (Kapantai et al., 2021; Lee, 2018; Shackelford et al., 2020; Vériter et al., 2020). Disinformation also fuels the rise of populist movements, reinforcing their claims (Di Mascio et al., 2021; Tripodi et al., 2023), and it is utilised to launch attacks on the democratic institutions of the EU or the US using COVID-related disinformation (Jerónimo & Esparza, 2022). Disinformation erodes trust in democratic societies, affecting the legitimacy of social and political institutions, leading to a trust crisis and a declining willingness of people to believe in facts (Claudia, 2022; Di Mascio et al., 2021; Lewandowsky & Van Der Linden, 2021; Rodríguez-Pérez & Canel, 2023). Democracies are particularly vulnerable to disinformation due to the limited means to deal with it effectively (Shadmy, 2022). Bjola and Papadakis (2021) provide a comprehensive overview, highlighting how disinformation harms the epistemological basis for truth-claim validation, intensifies emotional discussions, empowers destructive counterpublics, and reinforces challenges to multiculturalism and diversity. They note that information shared in this context often popularises anti-EU and anti-NATO narratives.

Security challenges resulting from disinformation closely intertwine with democracy-related issues, partly due to the role of polarization and radicalisation as security challenges. Scholars (Juurvee & Arold, 2021; Kapantai et al., 2021; Lewandowsky & Van Der Linden,

2021) argue that disinformation is associated with the spread of hatred, uncertainty, fear, hate crimes against minorities (e.g., immigrants), vandalism, supremacism, Islamophobia, racism, or misogyny (Vérifier et al., 2020). Echo chambers amplify already-established radical beliefs, making them more dangerous (Bjola & Papadakis, 2021; Di Mascio et al., 2021).

In the realm of public health, scholars have focused on the impact of COVID-related infodemics (Boulianne et al., 2022; Di Mascio et al., 2021; Jerónimo & Esparza, 2022). However, the adverse effects on public health extend beyond COVID-19, affecting areas like vaccination (Ajovalasit et al., 2021; Claudia, 2022), cancer, and nutrition (Kapantai et al., 2021).

From an economic perspective, disinformation leads to the rejection of technologies (Kapantai et al., 2021; Vérifier et al., 2020), impacting economic stability, market responses, and media-policy adjustments related to information disorders (Kapantai et al., 2021; Kouts-Klemm et al., 2022). It threatens economic recovery (Vérifier et al., 2020) and facilitates scams and cyberattacks (Lee, 2018). Tripodi et al. (2023) provide a quantifiable estimate of the trust issues imposed by disinformation, causing daily losses of up to USD 50-300 million in the United States.

In the technological realm, the importance of cyber defence and safeguarding information systems is emphasised. This is closely tied to the social dimension, as technologies are ultimately evaluated and used by people. Human cognition and psychological factors in cybersecurity are as crucial as technological aspects (Juurvee & Arold, 2021; Mlejnková, 2022). This cybersecurity component is interconnected with the previously mentioned democracy and security aspects, as the spread of disinformation using technical means exacerbates challenges related to democracy, elections, and polarisation (Manwaring & Holloway, 2023).

Conditioning Factors

In their literature review on disinformation taxonomy, Kapantai et al. (2021) consider various characteristics that describe the proliferation of disinformation. These characteristics fall into three key categories: characteristics of the information, characteristics of the environment, and characteristics of the information recipients. These categories encompass the majority of the conditioning factors discussed in the academic literature on the topic.

When examining the **characteristics of information**, it becomes evident that psychological biases play a significant role. As mentioned earlier, information that aligns with an individual's existing beliefs is more readily accepted (Kapantai et al., 2021; Levine, 2022; Millar, 2022).

Mlejnková (2022) sheds light on selective exposure, a phenomenon in which dissatisfied information consumers seek alternative sources. These sources may either provide verified trustworthy information or, conversely, propagate false news. This underscores the influence of psychological biases on the acceptance and pursuit of information.

Disinformation becomes more noticeable when it is repeatedly disseminated (Kapantai et al., 2021; Levine, 2022; Millar, 2022). Furthermore, the effectiveness of this propagation is enhanced when disinformation messages are infused with emotional content designed to engage and manipulate the irrational aspects of the human psyche (Kapantai et al., 2021).

Disinformation itself spreads more rapidly than actual information (Kyza et al., 2020) and has a "stickier" presence in human memory, exerting a prolonged influence (Lewandowsky & Van Der Linden, 2021). Millar (2022) adds that the continued influence of disinformation, even after it has been convincingly "corrected" for an individual, persists because the information is not simply deleted from memory but remains accessible and activated when prompted deliberately. This phenomenon is also related to the sleeper effect, which causes us to remember information longer than its source (Mlejnková, 2022).

While often carrying negative messages, disinformation spreads more rapidly due to factors such as arousing fear, a fundamental instinct (Kapantai et al., 2021), and informativeness (Salvi et al., 2021). A sense of urgency also contributes to the receptivity of disinformation (Kapantai et al., 2021), exemplified by click-bait ads and fake news on the internet.

In a post-truth context, false information is associated with questioning reality and presenting "alternative facts" that are used to provide a sense of "rationality" (Jerónimo & Esparza, 2022; Tripodi, 2023).

When it comes to the **characteristics of the environment**, it is widely acknowledged that the Internet and social media platforms contribute to decreased resilience and facilitate the rapid spread of disinformation (Boulianne et al., 2022; Di Mascio et al., 2021; Epstein et al., 2023; Golob et al., 2021; Humprecht et al., 2023; Kapantai et al., 2021; Miyamoto, 2021; Mlejnková, 2022; Vériter et al., 2020; Yang et al., 2021).

Tripodi et al. (2023) argue that individuals with weak literacy skills and a tendency to engage in "vertical reading" on the internet, often developed due to the overwhelming amount of information, are vulnerable to exploitation by propagandists. This is further elaborated by Pennycook & Rand (2021, as cited in Claudia, 2022), who points out that people tend to use quick, simplified thinking when encountering news headlines, making them more prone to believing something that looks familiar.

Additionally, the contemporary mode of content dissemination on social media, the business models employed by these platforms, and their technological designs contribute to the proliferation of disinformation (Bjola & Papadakis, 2021; Shadmy, 2022). The situation has been exacerbated with the development of AI and bot technologies (Jerónimo & Esparza, 2022).

In a paradigm where we consider each individual as a unique universe, it becomes evident that an **individual's characteristics** play a crucial role in shaping their resilience to disinformation.

In a paradigm where we view each individual as a unique universe, the **characteristics of a person** play a role in shaping their resilience to disinformation.

Claudia's review (2022) highlights several factors that make people susceptible to disinformation, including characteristics such as anxiety, histrionism, schizotypy, paranoia, narcissism, delusionality, dogmatism, religious fundamentalism, receptivity to misinformation, overclaiming, and magical beliefs.

Resilience to disinformation is closely linked to cognitive abilities and analytical skills that enable individuals to process incoming information effectively, differentiating between truth and falsehood (Rodríguez-Pérez & Canel, 2023). A study by Salvi et al. (2021) succinctly illustrates that the capacity to recognise disinformation is negatively correlated with cognitive inflexibility, a tendency to overlook alternatives, and a propensity for binary ("black-and-white") thinking.

One interesting cognitive bias discussed by Millar (2022) and Greifeneder (2021, as cited in Claudia, 2022) is the truth bias. When individuals encounter a claim that could be either true or false, they tend to accept it as accurate. Millar's study suggests that cultivating a propensity for analytical thinking can help people identify disinformation. However, it may still leave them susceptible to believing false information that aligns with their pre-existing beliefs. Moreover, Millar assumes that most people are unlikely to invest time, money, and effort into verifying information found on the internet.

Furthermore, Zimmerman et al.'s conceptual treatment of human information processing (2021) shows that information disorders are challenging to compete with since humans tend to presume honesty in others in most situations (2021, p. 122).

Resilience to disinformation is intricately linked to political interests, polarisation, and ideology, as evidenced by various studies (Boulianne et al., 2022; Humprecht et al., 2023; Lewandowsky & Van Der Linden, 2021; Salvi et al., 2021; Stein et al., 2023). Motivated information consumers tend to overly believe content that aligns with their identity and position (Pennycook & Rand, 2021, as cited in Claudia, 2022).

The impact of social media cannot be underestimated, as certain groups actively exploit these platforms due to their absence from traditional channels (Jerónimo & Esparza, 2022). Individuals sharing certain marginal beliefs are also active Internet users. It is worth noting that individuals often perceive members of opposing political parties as more susceptible to disinformation (Kapantai et al., 2021).

Political alignment with right-wing ideologies appears to play a significant role in shaping susceptibility to false information (Rodríguez-Pérez & Canel, 2023). This alignment shares characteristics such as scepticism towards fact-checking (Lyons et al., 2020).

Speaking of scepticism, it can also serve as a positive trait. People who deliberate more are less likely to believe false content and are better at distinguishing between true and false information (Pennycook & Rand, 2021, as cited in Claudia, 2022). Knowledge scepticism, characterised by questioning facts and expert authority, poses additional challenges to disinformation resilience, as noted by Drotner (2020).

In polarised societies, issues with limited political consensus, such as critical health concerns (e.g., COVID-19 infodemics), are especially vulnerable to ideological divisions, making productive discussions unlikely (Ajovalasit et al., 2021). Conversely, one explanation for people believing fake news is the presence of social consensus, where they observe that many other people (Claudia, 2022) or people within their social network (Levine, 2022) believe it.

In addition to the characteristics discussed, scholars have noted cross-country differences in the resilience of citizens to disinformation (Humprecht et al., 2023; Rodríguez-Pérez & Canel, 2023). These differences will be the focus of our subsequent research. Various countries, including the Czech Republic (Rychnovská & Kohút, 2018), the Baltic states (Kõuts-Klemm et al., 2022), specifically Estonia (Miyamoto, 2021), the Western Balkans (Dolan, 2022), and Spanish-speaking countries (Rodrigues-Virgili et al., 2021), have been discussed explicitly in the context of the challenges posed by disinformation.

These factors can manifest at both the micro (individual) and macro (societal) levels and exhibit intricate interconnections.

Actors

The actors involved in sustaining resilience to disinformation include policymakers, academia, media, civil society, businesses, and citizens themselves, and their interaction is primarily accounted for by cooperation.

Policymakers are perceived as responsible for keeping a pulse on "the real world" and taking steps to address problematic areas (Kyza et al., 2020; Rodríguez-Pérez & Canel, 2023). The recommendations they make and the sanctions they impose should be carefully balanced to avoid eroding trust within society (Kyza et al., 2020). Cooperation between policymakers, civil society, and the media plays a crucial role in countering disinformation (Di Mascio et al., 2021). Mlejnková (2022) highlights the increasing relevance of a holistic society-centric approach, placing society at the forefront of efforts to combat information warfare, emphasising the interplay of one individual's influence on another. Rychnovská and Kohút (2018) note that the diversity of experts in the field of disinformation reflects the broad range of required knowledge and is beneficial for coverage since various audiences are connected to various kinds of experts.

This collaboration becomes particularly essential in the absence of a lead agency responsible for countering disinformation, a vacuum that is often exploited by malignant actors (Miyamoto, 2021). Also, the lack of understanding by policymakers of the importance of media policy and challenges in that sphere decreases the efficiency of their collaboration (Köuts-Klemm et al., 2022).

The studies recognise the role of civil society and citizens in enhancing resilience against disinformation by promoting diverse ideas, opinions, and multiple stakeholder perspectives, thus fostering flexibility (Kyza et al., 2020; Romanova et al., 2020). Miyamoto (2021) cites Estonia and Taiwan as examples of thriving civil society involvement in collaboration with governmental bodies. While citizens are considered vulnerable information consumers at the macro level (Bjola & Papadakis, 2021; Miyamoto, 2021), they simultaneously act as both consumers and distributors at the micro level, highlighting their multifaceted role in information ecosystems.

The role of media in sustaining resilience is primarily related to directly combating disinformation, improving citizens' skills and knowledge, and enabling them to cope with information disorders (Kyza et al., 2020; Rodríguez-Pérez & Canel, 2023; Romanova et al., 2020), providing assistance with the interpretation of events, individuals, or objects that are on the agenda (Golob et al., 2021), and even contributing to the political transformation of societies and the functioning of democracies (Köuts-Klemm et al., 2022).

Some scholars specifically discuss the role of news media. For instance, Altay et al. (2023) find limited support for the notion that news media exacerbate misinformation issues. They recognise that the role of news is not unequivocal, as it exposes individuals to disinformation risks, but conclude that news media are essential for keeping people informed and resilient.

Steensen and Eide (2019) argue that news has become separate from journalism since the rise of social media. Based on the analysis of the 2011 terrorist attacks in Norway and news coverage thereof, they suggest that polyvocality provided by the news is critical to societal resilience to crises, allowing people to express themselves, access the sources they trust, and share a collective response.

Journalists are those who can tell the difference and identify fake news as "more of a thing" (Mcdougall, 2019), contributing to the debate on dealing with disinformation (Rychnovská & Kohút, 2018). The particular importance of media is recognised in countries with sizable vulnerable populations, such as Estonia with its Russian-speaking minority, as exemplified by Miyamoto (2021). The importance of media, especially local media, is mentioned by Jerónimo and Esparza (2022) as a vulnerability that enables the easier proliferation of disinformation.

Regarding the participation of academia and educators, they are contributors on a broad level, taking part in the debate on fake news and disinformation (Rychnovská & Kohút, 2018) and updating curricula to make them suitable for modern information disorders (Golob et al., 2021; Miyamoto, 2021). Teachers and school leaders are essential for daily interventions, encouraging the development of information skills (Monteiro et al., 2022), contributing to the strengthening of digital literacy (Chohan & Hu, 2022), developing educational approaches to facilitate challenges like knowledge scepticism (Dronter, 2020), citizens' awareness of their vulnerability (Rodríguez-Pérez & Canel, 2023), or disinformation about vulnerable groups (Melo-Pfeifer & Gertz, 2022).

The role of libraries is specifically mentioned as well, with libraries checking sources for information literacy (Mcdougall, 2019; Mehrad et al., 2020) and their employees being trusted community members capable of confronting disinformation (Tripodi et al., 2023).

The roles of business platforms are also mentioned by scholars, mainly concerning technological companies and their responsibility for policies and content (Golob et al., 2021; Habro et al., 2020; Romanova et al., 2020; Tan, 2022).

Speaking about malignant actors, although they are not the sole contributors to the spread of disinformation, and this is primarily explained by the character of the environment itself (Shadmy, 2022), it is better not to ignore the existence and role of such actors in the field.

Malignant actors may include authoritarian states (Bjola & Papadakis, 2021; Di Mascio et al., 2021; Manwaring & Holloway, 2023; Shackelford et al., 2020), populist and illiberal political forces within countries (Di Mascio et al., 2021; Juurvee & Arold, 2021), media organisations that participate in disinformation and propagandistic campaigns (Habro et al., 2020), and even "useful idiots" who unwittingly contribute to the spread of information disorders (Juurvee & Arold, 2021). In broader terms, as acknowledged by Vériter et al. (2020), "state and non-state actors are at the source of disinformation, which organisations, the media, and individuals, including public figures, may then relay".

Speaking of the latter, it is necessary to mention a study by Bjola and Papadakis (2021) on counterpublics, which explains that phenomenon. Counterpublics are acknowledged as an essential group that is both an actor and a group vulnerable to disinformation. Being politically mobilised, these groups promote issues associated with the disinformation agenda and engage in parallel discursive arenas, inventing and circulating counter-discourse to sustain the oppositional interpretation of their identities and interests. While classically associated with marginalised social groups (at different points, women, workers, racial or sexual minorities), from the standpoint of "unruly" actions, counterpublics are instead associated with populist or radical movements. For instance, elaborating on the Finnish case, the authors identify them as anti-immigrant, anti-feminist, and anti-Islamist groups calling for traditional values (radical right-wing) while also expressing reservations against the state for being "corrupted".

Vulnerable Groups

The discussion of vulnerable groups in terms of demographic characteristics in the present review offers several findings that may be taken into account. Demographic characteristics like age, education, and social status may play a role in conditioning vulnerability or resilience to information disorders, including specific types like conspiracy theories, fake news, and rumours. It is worth noting that some scholars argue that the strategies for dealing with information disorders, whether it is misinformation stemming from ignorance, disinformation being planned, or other types, do not fundamentally differ (Golob et al., 2021).

As for the age dimension, the sources tend to have a consensus that older people are more vulnerable to information disorders, including disinformation (Boulianne et al., 2022; Claudia, 2022; Dudin et al., 2019; Golob et al., 2021; Miyamoto, 2021; Rodríguez-Pérez & Canel, 2023); yet it is recognised that young people have their challenges, primarily associated with the extensive use of digital technologies (Miyamoto, 2021; Monteiro et al., 2022).

Education has some positive effects (Dudin et al., 2019; Golob et al., 2021; Rodríguez-Pérez & Canel, 2023), though it is not always decisive (Boulianne et al., 2022; Claudia, 2022). Higher income, at the same time, is a factor that favours resilience (Dudin et al., 2019).

As for the gender question, there are very different findings among scholars. Boulianne et al. (2022) argue that "being female is rarely significant as a factor in predicting awareness of, exposure to, and sharing of misinformation," while the article by Rodríguez-Pérez & Canel (2023) states that women have less resilience to disinformation, which, according to their commentary, contradicts other studies (Golob et al., 2021; Humprecht et al., 2021). One of the potential explanations may be conveyed from the Golob et al. (2021) study, where the authors elaborate that while having higher meta-reflexivity, women may have fewer opportunities to additionally check media content due to being more distracted in domestic spaces.

Interventions And Mitigation Strategies For Disinformation

Before delving into the studies of solutions for strengthening resilience, it is essential first to understand how resilience is established or installed.

The importance of cooperation and multidisciplinary in implementing these actions is emphasised in various dimensions, as discussed by Bjola & Papadakis (2021), Di Mascio et al. (2021), Jerónimo & Esparza (2022), Kapantai et al. (2021), Köuts-Klemm et al. (2022), Kyza et al. (2020), Miyamoto (2021), and Shackelford et al. (2020).

Kapantai et al. (2021) discuss various actions against disinformation, including large counter-disinformation initiatives, educational interventions, fact-checking programs, the development of standard codes of principles, and the establishment of relevant institutions.

Kyza et al. (2020) argue that responses to information disorders should consider the diverse voices of stakeholders and should be relevant to various fields, such as politics, healthcare, environmental protection, and commerce. They highlight the importance of close cooperation between online platforms and other stakeholders, enabling policymakers, experts, and fact-checkers to apply their expertise. They stress the need for transparent and explainable policies in this area, especially in the context of online disinformation.

Mlejnková (2022) notes that societal and technological resilience should go hand in hand, emphasising that the role of people remains crucial in evaluating the outputs of modern technologies.

Di Mascio et al. (2021) investigated responses to the COVID-19 infodemic and observed a shift towards co-regulatory approaches. Platforms are expected to act more responsibly, shaping a multi-stakeholder decision-making triangle that includes the platforms, civil society (including researchers and fact-checkers), and policymakers (public authorities).

At the EU level, StratCom Task Forces have been created to address challenges, including Russian disinformation (Romanova et al., 2020). Additionally, a High-Level Expert Group on fake news and online disinformation (HLEG) was established (Di Mascio et al., 2021).

Regarding how cooperation functions in terms of these measures, there is a perspective on resilience to disinformation that aligns with the well-known “freedom-security dilemma”. According to Romanova et al. (2020), this dilemma represents a continuum where one extreme is public security, and the other is public freedom.

In practical terms, this dilemma was exemplified by Kye et al. (2020), who describe an instance where people feared the removal of content they perceived as extremist, as it could have been seen as an attack on freedom of speech.

The concept of resilience to disinformation can be viewed through different paradigms.

The paternalistic paradigm involves bouncing back or returning to homeostasis, and it has its origins in hard science, among other fields (Buzzanell, 2010). In contrast, the adaptive paradigm focuses on "bouncing forward," which entails adjusting to new threats, as reflected in Kõuts-Klemm et al.'s (2022) observation that resilience helps in adapting to these new challenges. The former relies more on authorities, while the latter places greater emphasis on citizen involvement, empowering individuals to evaluate disinformation and prevent its spread (Lazer et al., 2018, as cited by Golob et al., 2021).

Romanova et al. (2020) define three approaches to resilience in the context of information disorders. Two of these approaches align with either the adaptive or paternalistic paradigms, while the third represents a hybrid of both paradigms. The first approach, rooted in the adaptive paradigm, emphasises self-organisation and adaptability for resilience. Systems evolve in response to threats in this approach. The second approach involves government intervention to maintain stability, indicating lower trust in citizens' critical thinking abilities. The third approach is characterised by government control and regulation, raising concerns about potential infringements on free speech and information rights.

While Romanova et al. (2020) believe that the adaptive paradigm is more flexible, and the paternalistic approach, while seeming more reliable, has its limitations and turns rigid against some threats, it might not be safe to neglect some paradigms or approaches. For instance, Mlejnková (2022) discusses four levels of resilience concerning information disorders: cognitive resilience, institutional settings, technological operations, and the legal framework. She points out that since cognitive resilience has natural limits, legal and technological measures are necessary components to combat disinformation effectively.

The academic literature reveals that measures employed by nation-states or international entities may encompass various strategies to combat information disorders. These strategies include **preventive**, which involves the containment and restriction of information disorders through regulatory enforcement and other policy actions; reactive, which encompasses activities such as debunking and fact-checking to counteract misinformation; and proactive, which focuses on the development of media and information literacy initiatives.

The choice of strategy for addressing information disorders often depends on the specific context, goals, and available resources. The effectiveness of these measures may also vary when dealing with the pervasive challenges posed by information disorders in the contemporary information landscape. These measures necessitate the cooperation of different actors and emphasise the importance of an interdisciplinary approach.

Preventive measures are exceptionally reasonable in situations where powerful external sources of disinformation pose a threat to various aspects of societal stability, such as the healthcare system and economic recovery. Taking binding preemptive measures to contain and neutralise disinformation is just as critical as implementing reactive and proactive measures (Vérifier et al., 2020).

In conclusion, this essay argues that the future of European stability depends not only on ensuring societal resilience to disinformation and conspiracy theories but also on designing preemptive mechanisms and confronting external sources of disinformation that jeopardise European healthcare provisions, economic recovery, and geo-economic strength.

While the importance of reactive measures is acknowledged (Rodríguez-Pérez & Canel, 2023; Romanova et al., 2020), especially in situations where citizens' ability to analyse information has not yet reached a desirable level (Golob et al., 2021), it is worth remembering that simply presenting corrected information does not always work for the public. In some cases, when fundamental beliefs are involved, it can even worsen the situation (Kyza et al., 2020; Millar, 2022).

Proactive measures focus on citizens and their attitudes rather than just the information itself. Millar (2022) writes that fulfilling the obligation to avoid sources of disinformation is relatively easy, and it is essential for citizens to engage in that practice.

There is a consensus recognising media literacy, including its digital aspects, as a crucial point in sustaining resilience to information disorders. Civic media literacy, encompassing critical thinking and online culture, is mentioned by Bjola and Papadakis (2021). Policy recommendations on improving digital security and awareness of how algorithms and data function are offered by Miyamoto (2021). Monteiro et al. (2022) note that the digital citizenship of the youth can be improved through education, and Lee (2018) suggests that there is room for action in the digital education of older adult populations as well. Rodríguez-Pérez & Canel (2023) emphasise that educational strategies in terms of information literacy should raise citizens' awareness of their vulnerabilities in differentiating truth claims from falsehoods. Citizens' empowerment complements regulatory policy responses and is of no less importance. Media literacy education is mainly about empowering people to make informed decisions and take an active role in society, facilitating a critical approach to all sources. It is a long-term intervention rather than a short-term solution (Golob et al., 2021; McDougall, 2019).

Lewandowsky and Van Der Linden (2021) believe that inoculation may be a promising avenue to boost resilience to disinformation. Inoculation comprises warning messages that activate the threat and prebunking (refutational preemption). This process may be more efficient when people are not passively provided with argument refutation but are tasked to generate their counter-arguments.

Habro et al. (2020) also write about “vaccination” (inoculation), which consists of delivering the original message and preventing the detection of false claims that may arise when the message is released. However, they admit that it is not easy to reproduce such an approach in practice.

As an example of a comprehensive approach to sustaining resilience to disinformation, Bjola and Papadakis (2021) provide an example from Finland. Instead of fact-checking every

narrative, policymakers aim to instil a new sense of identity based on education, social equality, and political stability, where there will be less space for information disorders.

Methodology

The articles published are mainly empirical, utilising data collected through accepted social science methods. These methods encompass a wide range of approaches to study resilience-related issues. These methods can be classified based on the level of analysis, as micro-level, meso-level, and macro-level analyses often require distinct methodological approaches.

Micro-level analysis is the most common research design when analysing vulnerability or resilience. Researchers employ various methods to study the vulnerability of social groups, individuals, or the activities of specific actors. These methods include in-depth interviews (Kyza et al., 2020; Mcdougall, 2019; Tripodi et al., 2023; Zainab et al., 2022), focus groups (Cummings & Cleghorn, 2022; Hammond et al., 2022; Kyza et al., 2020; Manwaring & Holloway, 2023), or experiments (Epstein et al., 2023; Habro et al., 2020; Scharrer et al., 2022; Stein et al., 2023). Survey designs are often used to incorporate an attitudinal component into the analysis and to generalise the findings to a broader scale (Altay et al., 2023; Bargaoanu & Radu, 2018; Boulianne et al., 2022; Delgado et al., 2022; Golob et al., 2021; Humprecht et al., 2023; Lyons et al., 2020; Manwaring & Holloway, 2023; Monteiro et al., 2020; Raposo-Rivas et al., 2021; Rodríguez-Virgili et al., 2021; Salvi et al., 2021). Less frequently, other qualitative methods are used, such as ethnographic observations (Tripodi et al., 2023) or stakeholder mapping (Rychnovská & Kohút, 2018).

Typically, researchers use a single-group design, whereas the multi-group design allows better consideration of the role of different actors in building the resilience of a particular group, as demonstrated by Hammond et al. (2022) in the case of digital resilience among pre-teens, who are also influenced by parents, teachers, and government actors. The generalizability of the study is often limited if contextual factors are not taken into account. The analysis of vulnerability and resilience has shown the importance of context.

Another object of research can be different types of texts. The analysis of public texts or social media posts provides knowledge about the structure that influences resilience. In this case, qualitative or quantitative analysis of media or other texts is used (Ajovalasit et al., 2021; Romanova et al., 2020). The analysis of texts is less common when we talk about vulnerability or resilience.

At the **macro level**, researchers often compare different societies and countries to assess their resilience to disinformation. A pioneering study in this area was conducted by Humprecht et al. (2020), who presented indicators of resilience in cross-country comparisons. Various tools are used to distinguish more resilient from less resilient countries analytically. One approach is to utilise different indices that classify countries based on secondary data. Several indices come into play, such as NATO Stratcom's Permeability Index, IUT's Global

Cybersecurity Index, GLOBSEC's Vulnerability Index, Democracy Index, V-Dem data, Disinformation Resilience Index, and many others. Comparative analyses are conducted on groups of countries, including the Balkans (Dolan, 2022), Central and Eastern Europe (Bargaoanu & Radu, 2018; Kyianytsia et al., 2022), the Baltics (Köuts-Klemm et al., 2022), and more.

Another set of studies utilises representative surveys to analyse resilience to disinformation. The most notable comparative survey that allows for cross-country comparisons is the Reuters Institute Digital News Report. Researchers have employed this survey to compare the situation in Spanish-speaking countries like Argentina, Chile, and Spain (Rodríguez-Virgili et al., 2021).

Macro-level studies are less common than micro-level studies but are still prevalent in the field of resilience to disinformation. Macro-level analysis demands more complex data sets, and comparability issues are often addressed by using recognised international indicators. Researchers frequently employ the case study method to overcome the challenges of missing data and gain deeper insights into the social context (Bjola & Papadakis, 2020; Di Mascio et al., 2021; Fominaya, 2022; Kyza et al., 2020; Romanova et al., 2020). In some instances, research papers combine system analysis with theoretical and empirical findings (e.g., Kozyreva et al., 2020).

Social network studies, which primarily focus on online communication, provide valuable insights into the virtual world. Social network analysis is not restricted to specific groups or geographical areas (e.g., Zahind et al., 2022). While Twitter is a common platform for analysis, it tends to concentrate on English-language users, thereby limiting the scope. There are, however, a few positive examples from other regions, such as research on China and Japan (e.g., Zhao et al., 2020).

The research field is evolving and maturing, with the publication of several conceptual articles that synthesise existing knowledge from different perspectives. **Literature reviews** explore various aspects, such as human information processing from a psychological perspective (Kozyreva et al., 2020) and different conceptualisations of digital environments from an interdisciplinary standpoint (Caled & Silva, 2022). Additionally, researchers are examining AI solutions for combatting disinformation through fact-checking (Kertysova, 2018).

Discussion And Conclusion

The analysis presented in the report is crucial for understanding and addressing information disorders in the Baltic region, a region particularly susceptible to disinformation campaigns due to its geopolitical situation and historical context. By conceptualising resilience, the study sheds light on the multifaceted nature of information disorders, emphasising how they impact various domains such as democracy, security, and public health. This is important for the regions which are constantly dealing with external propaganda and disinformation campaigns.

The conditioning factors mentioned here, including the emotional content of information, the role of social media platforms, and individual cognitive biases, provide a nuanced understanding of how disinformation spreads and takes hold. In the context where digital media is rapidly evolving, and the population's varied experiences with information sources shape their susceptibility to disinformation, this provides an understanding of the priority areas of attention focus.

Moreover, the identification of critical actors in building resilience, such as policymakers, academia, and civil society, underscores the need for collaborative efforts in the Baltic states to counteract these challenges. While each country in the region has unique vulnerabilities and strengths, shaped by their individual historical, cultural, and political experiences, all of them must be considered in developing targeted strategies to combat information disorders.

The solutions and interventions discussed in the document, including educational initiatives and fact-checking programs, are vital for building a more informed and resilient public in the Baltics.

This research offers a framework for addressing disinformation in the Baltic region by describing how it is disseminated, prevented, and countered. It draws attention to the intricate dynamics of those occurrences and the requirement for an all-encompassing, context-specific strategy.

5. Teaching Media Literacy At School As An Interdisciplinary Objective

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Introduction

In the Estonian context, the debate on misinformation's destructive impact on society started in 2006 and 2007 in connection with the public debate on removing the World War II monument (also known as the "**Bronze Soldier Campaign**") from Tallinn. The cyber-attacks on Estonia's critical infrastructure that followed the monument's removal were unprecedented locally and globally (Tamm, 2012). The following 15 years will be momentous regarding the spread of global disinformation. Significant events included **Russia's invasion of Georgia (in 2008) and Ukraine (2014), Brexit (2016), as well as Donald Trump's election campaign (2016)**. In 2019/2020, we witnessed the spread of misinformation related to the COVID-19 pandemic, followed by the war in Ukraine in February 2022. On the one hand, these events created a need to increase societal resilience to misinformation, inevitably accompanied by a debate on the effectiveness of different measures to help maintain social order.

From a societal point of view, educational policy measures to counter misinformation are long-term and do not have an immediate impact. The debate on these measures occurs both inside and outside the educational field. In the definition of the Estonian Ministry of Education and Research, the teaching of media literacy at school is, above all, a broad-based task:

...to support and develop students' development as people who adequately perceive the surrounding information environment, can critically analyse and evaluate textual, pictorial, figurative and orally presented content, are aware of societal, ethical norms and can create content in compliance with them (Ministry of Education and Research 2023a).

The need to teach media literacy at school in an interdisciplinary way has been discussed in Estonia since at least the 2011 revision of the national curriculum for primary schools (Official Journal, 2011). Various reports on this topic have been published since then, and there is an ongoing corresponding committee at the Ministry of Education and Research (see Ministry of Education and Research 2023b, 2023c). In this part of the report, we focus on how the 'interdisciplinary' approach to media literacy in science literature has been reflected in the last decade (2013-2023), focusing on its teaching in general education schools. Above all, we are interested in what concepts are used to define interdisciplinary media literacy and to what

extent there is overlap. This works as a complimentary supplement to the work done by national authorities but should also be of interest to current and future educators.

Research Questions And Method

Our starting point is the understanding that **there are different interpretations and conceptualisations of interdisciplinarity in media literacy teaching and learning**. In order to obtain a representative view of the different approaches to interdisciplinary media literacy teaching, we searched three major international research databases: Web of Science, Ebsco and Scopus. The following combinations of search terms and keywords were used: "interdisciplinarity + media literacy in education", "media literacy studies", "media literacy + pseudoscience", "media literacy + science denial", "media literacy + science literacy/science denial", "media literacy + social studies", "media literacy + media manipulation", "media literacy + teacher training", "media literacy + confidence in recognising disinformation", "media literacy + intervention". The keywords were defined to map the field as broadly as possible.

Two researchers, who saved the results as .ris files, independently searched the databases, yielding a total of 5574 articles. To typologise and code the articles, we used an online tool provided by Rayyan.ai. A three-step review of the articles was also performed in the Rayyan environment: **1)** a primary review by the researcher, which distinguished between thematically appropriate and inappropriate articles, **2)** a blind review by the co-investigator, which provided a comparative rating of the collected articles, and **3)** a review of the articles with mutually different ratings, which resulted in a final consensus sample. In the final sample, 180 articles were screened.

In analysing the selected articles, we proceeded from our initial assumption that an interdisciplinary approach to media literacy teaching involves different conceptual approaches of different authors and that there is some overlap in the concepts used to define interdisciplinary media literacy. There are different justifications for an interdisciplinary approach to media literacy and many differences in how students' participation in interdisciplinary learning is perceived.

Using the close reading method, we identified two main axes. These are:

- 1. the functional axis**, which describes the objectives of media education, i.e. the conceptualisation of media literacy education on the scale of protection ← → empowerment, and
- 2. the instructionist axis**, that describes the learning approach on the scale critical ← → traditional.

The scale of protection vs empowerment describes the view of the objectives of media education - whether the emphasis is on protecting learners from various threats (from cyberbullying and identity misuse to health disinformation) or rather on empowering students to act in the media environment and making their voices heard. Protection-focused approaches to media literacy education assume that the central task of media education is to protect students - but also society - from the threats posed by the information environment by imposing different rules on the environment and by developing the skills needed to cope with situations of information corruption, such as criticality of sources, ability to identify misinformation, etc. Media literacy education is not only about protecting students but also about protecting society from the threats posed by the information environment. By contrast, approaches that focus on empowering media literacy treat the media as an opportunity rather than a threat, including as a way of making one's voice heard in the media environment. Thus, it can be said that approaches that focus on protection focus on the role of the student as a recipient of media content. At the same time, approaches that focus on empowerment also emphasise the role of the student as an active content creator.

The critical vs traditional scale describes different approaches to learning. The “traditional” is the instructional approach to learning, where the student is treated as a recipient of knowledge. The critical approach treats students as co-constructors of knowledge in dialogue with the teacher.

With these two axes describing media literacy's objectives and learning approaches, we have created a conceptual space where the different concepts that describe media literacy are situated. It should also be noted that the concepts placed on these axes and the distances between the concepts are not absolute but indicative.

Protection And Empowerment, Critical Approach Vs Traditional Approach - Empowerment Or Protection?

One important axis to distinguish between the articles reviewed is whether the central aim of developing media literacy should be to 'protect' students (a protectionist approach) or to 'empower' them.

In themselves, the two objectives are not necessarily mutually exclusive. For example, the acquisition of strategies for recognising disinformation, which implies an emphasis on the protective function of media literacy, can also empower individuals to make better choices (e.g. health, politics, etc.). However, there is a long-standing debate in the literature about these two perspectives - empowerment and protective functions (Hobbs, 2017). This distinction goes back to the critique of the 'culture industry' by critical theorists of the first half and middle of the 20th century to push the 'masses' into 'passivity'.

As Potter (2022) points out, this distinction was critically developed by the Brazilian educational innovator Paulo Freire in his *Pedagogy for the Oppressed* (1970), in whose view much of media education at the time was controlled by elites who wanted to protect 'high

culture', and who, in his next book, *Education for Critical Consciousness* (1973), stressed that media education must empower people by helping them to make media choices and by enabling them to interpret media content in ways that help people to improve their lives.

The same debate on protection and empowerment continues in today's debates on children's and young people's media consumption and media education and policy. Children's susceptibility to advertisements and messages has been a long-standing concern for media literacy promoters (Hobbs, 2017), and several national and international regulations and recommendations have been adopted to protect children and young people from their effects (for example, the WHO recommendations on the marketing of unhealthy food to children is a recent example).

"The 'protective' approach sees the development of media literacy as aiming to protect learners from, for example, disinformation, health misinformation (Southwell et al., 2019), identity theft, cyberbullying, as well as physical and psychological problems associated with the overuse of devices, such as obesity, internet and gaming addiction or social isolation, and the negative mental health effects of cyberbullying and bullying (Falloon, 2020; Khan et al. 2020). In addition to the need to protect individuals from the dangers of information corruption, the 'protective' approach sees media education as an opportunity to protect society from the negative consequences of the spread of disinformation and misinformation on the culture of public debate.

For example, Damico, Baildon and Panos (2018) highlight the need for teachers' media literacy skills in the context of climate change and related misinformation. "The 'harmful' influences from which people need protection, according to the protectionist paradigm, can also be, for example, stereotypes in the media that reproduce prejudices. Thus, protectionist paradigms of media education also offer important perspectives on how "media and technology shape and reflect cultural values, including people's views on violence, sexuality, gender and consumer culture" (Hobbs, 2017). As Kellner (2005) notes, "Individuals are often not aware that they are being educated and constructed by media culture, as its pedagogy is frequently invisible and unconscious."

Policy-makers from a defensive paradigm may be tempted to treat media education as a 'protective graft' (Potter, 2017) that helps to create 'antibodies' to cope with information hoarding. However, this is too narrow an approach. Media literacy is closely linked to critical thinking more broadly and should not be seen merely as a 'cure that solves the problem of "fake news"' (De Abreau, 2019).

"Alongside the 'defence' paradigm, media literacy is conceptualised within an 'empowerment' paradigm. Hobbs (2017) describes the empowering perspective as "focusing on the competencies that enable people to access, analyse and create media".

UNESCO's Five Laws of Media and Information Literacy (MIL) emphasises the empowering role of media literacy. Law Two of this document states: "Every citizen is a creator of

information/knowledge and has a message. They must be empowered to access new information/knowledge and to express themselves. MIL is equally for all - women and men - and a nexus of human rights." (It should be noted here that UNESCO has advocated for introducing media education in the education system since 1982, when the Grünwald Declaration was adopted. This declaration recommends that media education begin as early as primary education, aiming to develop responsible citizens and promote 'a critical understanding of the phenomenon of communication'.)

The empowering paradigm does not consider learners/media consumers as mere recipients of the communication process, whose role in media consumption is at best limited to the critical decoding and evaluation of material but also values the role of learners as communicators. This implies, among other things, the development of media content creation skills. As Kellner and Share (2005) point out, this can empower and give voice to underrepresented or misrepresented groups in the media, primarily through the learning process.

In some official documents and reports, 'advocacy' is treated as part of 'empowerment'. For example, the Council of the EU review 'Mapping of media literacy practices and actions in EU-28' states that one of the objectives of developing media literacy can be to 'empower children to move around the internet in a more informed and therefore safer way' (2016).

'Empowerment' is also referred to by UNESCO (2021) in its media and information literacy curriculum as a factor that enables people to 'understand the positive things they can do through media and digital tools, thereby promoting the online environment and contributing information for the public good'.

The 'empowering' paradigm of media education can be understood in a narrow and broad sense. In the narrowest sense, it involves the development of competencies to access, work with and evaluate the information they need (Falloon, 2020). In the broadest sense, it involves the development of learners as good 'global citizens' (Casey, 2013).

In short, this axis reflects different understandings of the aims of media education - one side (protection) sees the learner as someone who, through media education, primarily needs protection from a range of threats (disinformation, online fraud, manipulation, implicit media stereotyping, etc.). The second pillar (empowerment approach) emphasises the importance of developing skills in media education to help people navigate media content and make their voices heard as citizens, including those of marginalised groups.

Critical (Constructivist) And Traditional (Instructional) Approaches To Learning

The second axis, used to systematise interdisciplinary approaches to media literacy, describes the learning approach.

In education, two well-known views on the learning approach derive from general rules and basic principles of learning and teaching (Vinter, 2017). These are instructionalism as an educational application of objectivism and constructivism as an educational application of subjectivism (Jonassen, 1991; Vinter, 2017). Traditional epistemology views knowledge as objective, while constructivist epistemology views knowledge as a person's subjective understanding and comprehension (Vinter, 2017).

Instructionalism, as a term, is derived from the assumption that the main activity in the classroom is instruction by the teacher (Vinter, 2017). Brazilian educational innovator Paolo Freire has called the same approach the 'banking concept of education' - teachers 'deposit' knowledge in students, with the teacher as the subject of education and students as the objects (Lamkins, 2023). In traditional classrooms, teachers are more likely to use the lecture form, which, in addition to being cost-effective, is an effective form of teaching, especially in large classrooms (Gonzales & Wilkinson, 2014; cited in Vinter, 2017).

The instructionalist view of learning is also described by many other terms such as teacher-oriented classrooms (Vinter, 2017), prescriptive approach to teaching (Gonzales and Wilkinson, 2014, cited in Vinter, 2017), etc. In our axis, we use the term traditional learning approach to refer to this approach.

While objectivism's central emphasis is on the object of knowledge, constructivism focuses on how we construct knowledge - the latter does not imply that constructivism denies the existence of external reality but refers to the notion that everyone constructs his or her reality by interpreting perceived experiences from the external world (Jonassen, 1991). In the case of education, this distinction implies that. In contrast, the instructionalist or traditional approach seeks "to map the structure of the external reality onto learners, constructivists recommend that we help them to reconstruct their own meaningful and conceptually functional representations of the external world" (Jonassen, 1991).

This approach to learning, which contrasts with the traditional (or instructional) approach, has been called both constructivist and critical pedagogy. Without going into detail here on the history of constructivist learning and critical pedagogy development, we will note that they have a solid common ground. In our axis, we use the term 'critical' as the opposite of the traditional approach to learning.

One of the central features of critical/constructivist pedagogy is a dialogical relationship between teacher and learner (Park, 2023), with students as co-constructors of knowledge so that the classroom is a model of democracy rather than a place where information flows from one direction to another (Bogdan, 2023).

In doing so, the critical approach does not simply involve changing the hierarchical relationship between teacher and student but also prioritising social justice, promoting awareness of power relations, and valuing learners' voices and experiences (Bogdan, 2023).

According to Kellner and Share (2019), critical media literacy 'not only teaches students to learn about the media, resist media manipulation, and use media in constructive ways but also engages in the development of capacities that help shape responsible citizens who are motivated and competent participants in socio-political life'. According to the same authors (2019), 'critical pedagogy' representatives can 'empower students to become citizens in a complex, changing, challenging world'.

Fundamental Concepts Of Interdisciplinary Media Literacy

Key concepts are conceptual terms that summarise a particular perspective from which interdisciplinarity is defined. Four main approaches can be distinguished in conceptualising media literacy.

One of the most common approaches considers media literacy from a general paradigm without going into too much detail in its definition. For example, the text entitled "McLuhan's Challenge to Critical Media Literacy: The City as a Classroom Textbook" (Mason, 2016) allows us to situate the text in question within our framework on the axis describing both its social functions (empowerment/protection) and its learning approach (critical/traditional).

Often, our object (media literacy) is reconceptualised by replacing it with another concept, e.g. media literacy as a social process: "Media education and media literacy: Conceptualising the significance of critical and twenty-first-century literacies in media education" (Chanda, 2017). Such approaches generally offer a broader view of media literacy development. They can be described in terms of their social functionality as well as in terms of a specific learning approach.

Depending on the field, this may involve a conceptual specification, e.g. media literacy and sustainability: 'Greening the Mediapolis with media literacy' (López, 2014), the inclusion of which generally also implies an interdisciplinary starting point. This is a relatively narrow approach to interdisciplinarity in our context, primarily described along the so-called axis of functionality (empowerment/protection).

A fourth (and slightly less common) approach is to situate the object in question (media literacy) within some other field, where it is defined as a quality that makes sense of the field in question, e.g. media literacy in the family: "Importance of values education in the dimension of social studies course and effects of media on values" (Alimcan and Altunay, 2017). In this case, too, it is inevitably an interdisciplinary view, as both concepts, e.g. "family" and "media literacy", are opened up in a new way, relating them to other concepts outside their traditional boundaries. At the same time, such a definition of media literacy generally offers a narrower perspective, which also needs to show a general context to be defined. Such perspectives

are generally definable primarily along the descriptive axis of learning approaches (critical/traditional or instructional). However, there is one crucial exception: opening up the notion of media literacy in multicultural contexts is primarily concerned with empowering students to cope with the potential dangers they face in the information environment. For a more detailed overview, see Table 1.

CRITICAL MEDIA LITERACY (CML) AT SCHOOL (1) High-quality media education means, first and foremost, the development of critical thinking from a student-centered approach to learning, because critical thinking and media literacy are interlinked. (2) Reduction of unscientific beliefs (conspiracy theories, irrational health beliefs, etc.) among teachers, as much research indicates that critical thinking is negatively correlated with the tendency to adopt unscientific beliefs.	DIGITAL LITERACIES (1) critical media literacy and digital ethics (2) 'new media literacy', media competence and development of the technologies of education (3) media literacy and cyber violence (4) social media literacy (5) media education in the age of digital capitalism (6) data literacy / big data analytics and media literacy
ML AND SCIENTIFIC REASONING (1) science denial (2) critical energy- and climate literacy (3) importance of storytelling in format of scientific reasoning (4) the role of teachers as "brokers" of science-related narratives (5) storytelling in teaching and learning ML (6) media literacy in different classrooms	ML IN A MULTICULTURAL CONTEXT (1) a more general approach, that relies Richard Hoggart's classic work <i>The Uses of Literacy</i> (1957), i.e. Pete Bennett's (et al) book on "The uses of media literacy" (Bennett et al 2020), where they apply Hoggart's framework to media literacy today, examining media literacy's various uses. (2) Multicultural approaches to teaching media literacy as a task that involves the development of critical thinking skills. (3) Thirdly, there is a separate area of the discussion of multicultural issues in cosmopolitan contexts. This area includes global themes such as poverty, global water and sanitation, climate change, etc.
CML AND CIVIC PARTICIPATION (1) arguments in favor of civic literacy and their use in debates (2) the functioning of civil society in the era of digital platforms (3) supporting students' coping when exposed to different forms of misinformation (4) some specific attention to different forms of discrimination (racial, gender, sexual, age, etc.) that require knowledge of the functioning of civil society.	MULTIDIMENSIONAL ML (1) A semiotic discussion over the language's power as a dominant means to express meanings. (2) Also it is worth mentioning an approach to 'media literacy' as a metaphor that explains media as environment and ecosystem having a linguistic origin. (3) Thirdly, there is the concept of multiliteracies that stresses the importance of different modalities that media literacy embraces: different ways of articulating the linguistic, visual, audio, spatial, and gestural dimensions in digital culture. (4) Fourth: beyond linguistics there is the discussion on educational policies and the prospects of education in the conditions of the rapidly evolving mediascape.
ML AND SUSTAINABILITY (1) media literacy in family (2) media literacy as a social process (3) media literacy and media ecologies (4) media literacy and innovation models (5) media literacy and social transformation / transformative ML as an enabler of different	

Table 1

1. Critical Media Literacy At School

In the general context of school education, we highlight two key aspects:

(1) High-quality media education means, first and foremost, the development of critical thinking from a student-centred approach to learning because critical thinking and media literacy are interlinked; only an individual who is used to thinking critically will be able to orientate himself in a media space characterised by information overload. "Critical thinking should not be a means to an end in education, but a goal for all education and teaching" (Huljevi and Cikovaci, 2018). This debate concerns the various teacher training programs, the development and justification of best practices, the development of learning games, and educational regulation.

(2) Reduction of unscientific beliefs (conspiracy theories, irrational health beliefs, etc.) among teachers, as much research indicates that critical thinking is negatively correlated with the tendency to adopt unscientific beliefs (Pennycook, Cheyne, Seli, Koehler, & Fugelsang, 2012; Swami, Voracek, Stieger, Tran, & Furnham, 2014).

Media education, therefore, plays a crucial role in the development of critical thinking among students as well as teachers, which is essential for navigating the information overload of the media space. Specifically, reducing unscientific beliefs among teachers is necessary to promote critical thinking in the classroom. The importance of critical thinking and how it can be fostered cannot be understated in the general population, either.

2. Critical Media Literacy And Civic Participation

The issue of civic education and civic responsibility certainly outweighs the 17 articles cited in our sample. First, this area deserves to be highlighted because a separate term, civic literacy, has been coined to describe the relationship between civic development and media literacy (Flornes 2017). We highlight five of the focuses in this area:

- Arguments in favour of civic literacy and its use in debates (Manfra and Holmes, 2020).
- The functioning of civil society in the era of digital platforms (Martens and Hobbs, 2015),
- supporting students' coping when exposed to different forms of misinformation (Hodgin and Kahne 2018).
- Some specific attention to different forms of discrimination (racial, gender, sexual, age, etc.) that require knowledge of the functioning of civil society (social values, civic engagement, sustainability and resilience) to unpack (Lauricella et al. 2020; Rasi et al. 2019).

Several research gaps could be explored further in this category, and most of the literature is relatively new, indicating a possibility of a growing trend.

3. Media Literacy And Scientific Reasoning

Thirteen articles in our sample focus on the *scientific* aspects of teaching media literacy from an interdisciplinary perspective. As in the previous case, the scope of this area is much broader. In addition to the articles that predominantly focus on the science-related aspects of ML, some areas do not necessarily mention science but are still tightly related to this context.

Among other focuses, we point colleagues to the discourses of:

- science denial (Björnberg et al., 2017),
- critical energy- and climate literacy (Damico et al., 2018),
- the importance of storytelling in the format of scientific reasoning (Ranieri and Bruni, 2018),
- the role of teachers as “brokers” of science-related narratives (especially concerning teaching social history needs to be stressed that there has been little attention paid to how the dissemination of select news information regarding the recent past influences how history is taught in schools (Higdon, Huff and Lyons, 2021),
- storytelling in teaching and learning ML, e.g. documentaries, film-making in general (Vivitsou et al., 2017),
- media literacy in different classrooms, e.g. biology, chemistry, physics, etc. (Janks, 2014).

[There are materials in the MIL section of the BECID website on several of the above.](#)

4. Media Literacy And Sustainability

Sustainability here is meant as a broader context of interdisciplinary media literacy. Sustainability as an aspect of ML was brought up in 6 articles in relation to topics such as “Program sustainability through interdisciplinary networking: on connecting foreign language programs with sustainability studies and other fields” (Melin, 2014) or “Greening the Mediapolis with media literacy” (Lopez, 2014). On the other hand, *sustainability* as a conceptual framework is much broader. In our framework, it involves topics such as:

- media literacy in the family (Alimcan and Altunay, 2017; Pérez-Escoda et al., 2017),
- media literacy as a social process (Manca et al., 2021),
- media literacy and media ecologies (Higdon et al., 2021),
- media literacy and innovation models (Forgó, 2013) and also:
- media literacy and social transformation / transformative ML as an enabler of different functionalities/roles of citizenship (Forsman, 2020).

Initial results suggest a gap in the potential limitations of interdisciplinary networking and its impact on sustainability in media literacy or the possibilities of conflicting goals and priorities among different fields involved in sustainability work.

5. Media Literacy In A Multicultural Context

As we look at our binary ‘protection’ vs ‘empowerment’, the concept of media literacy in multicultural contexts characterises the empowerment end of it. I.e., the empowerment strategies of the related stakeholders (45 articles related to ‘cultural’ issues in our context of interdisciplinary media literacy, i.e. 25% of the sample). The issues teachers face in multicultural contexts are similar to those we pointed out about sustainability. However, multiculturalism has to be stressed separately, as it seems to be a focal point for many approaches. Three main directions need to be pointed in this context: first, a more general approach that relies on Richard Hoggart’s classic work *The Uses of Literacy* (1957), i.e. Pete Bennett’s (et al., 2020) book “*The Uses of Media Literacy*”, where they apply Hoggart’s framework to media literacy today, examining media literacy’s various uses, the tensions between them and what this means for people, communities and the contemporary configurations of social class.

Second, multicultural approaches to teaching media literacy as a task that involves the development of critical thinking skills (Godhe, 2019; Yıldırım, 2015). Also, there is a niche to talk about ‘habitus’ and ‘cultural habits’ in the context of interdisciplinary media literacy, which falls into the category of multicultural approaches, as it explores how selecting critical thinking, self-regulation and communication as crucial competencies can contribute for coping with an immersive media experience (Bonacho and Santos, 2022).

Thirdly, there is a separate area of the discussion of multicultural issues in cosmopolitan contexts. This area includes global themes such as poverty, global water and sanitation, climate change, and cross-cultural exchange. This theory-into-practice approach attempts to enable teachers to facilitate collaborative inquiry projects with their students (Spires et al., 2019; Bean, 2015).

6. Digital Literacies

As we move on to different subcategories of interdisciplinary media literacy, they are all closely related to various aspects of “critical thinking”. The development of digital literacies includes all aspects of critical media literacy as we defined it above; there is a presence of various digital contexts. The prefix ‘digital’ occurs in 71 articles, 39,4% of our sample.

As follows, we point out some areas of interest that seem to be more relevant than others:

- critical media literacy and digital ethics (Luke and Sefton-Green, 2018),
- ‘new media literacy’, media competence and development of the technologies of education (Caldeiro-Pedreira, 2019),
- media literacy and cyber violence (Nagle, 2018),

- social media literacy (Wusylko et al., 2022),
- media education in the age of digital capitalism (Buckingham, 2020),
- data literacy / big data analytics and media literacy, i.e. how to read big data visualisations? (Lacković, 2020).

7. Multidimensional Media Literacy

The angle of ‘multidimensionality’ stresses technological and linguistic dimensions that need to be improved to develop (digital) media literacy (Caldeiro-Pedreira, 2019). Three essential linguistic aspects need to be pointed out in relation to multidimensional literacy:

(1) A semiotic discussion over the language's power as a dominant means to express meanings. In this context, special attention is paid to multimodal communication as a norm in the modern era of communication and the internet. Diverse forms of media are combined in different ways to create new meanings (media language and/or visual grammar). Also, there is a remarkable increase and diversity in different forms of representation other than written or spoken language that also brings along changes in the field of literacy (Saçak, 2019).

(2) Also, it is worth mentioning an approach to ‘media literacy’ as a metaphor that explains media as an environment and ecosystem with a linguistic origin. This approach suggests that media literacy is a much broader field than just about “literacy” (Mason et al., 2021).

(3) Thirdly, the concept of multiliteracies stresses the importance of different modalities that media literacy embraces: different ways of articulating the linguistic, visual, audio, spatial, and gestural dimensions in digital culture. This framework highlights convergence in learning experiences undertaken in formal and informal contexts (Fantin, 2013).

(4) Fourth: beyond linguistics, there is the discussion on educational policies and the prospects of education in the conditions of the rapidly evolving mediascape. This is the level of meta-analysis and self-reflection, where authors discuss the challenges and opportunities of media literacy via literature reviews and policy analysis (Gavrila, 2018; Martínez-Bravo et al., 2020; Wuyckens et al., 2022).

Discussion And Conclusions

To conclude this overview, we highlight the main findings. We started this review by describing the imaginary space of interdisciplinary media literacy through the oppositions of traditional/instructive vs critical and empowering vs protective.

Four main approaches can be distinguished in conceptualising media literacy:

1. One of the most common approaches considers media literacy from a general paradigm without going into too much detail in its definition. A general approach allows

us to situate the text within our framework on the axis describing its social functions (empowerment/protection) and its learning approach (critical/traditional).

2. Often, our object (media literacy) is reconceptualised by replacing it with another concept, e.g. media literacy as a social process. Such approaches generally offer a broader view of media literacy development. They can be described in terms of their social functionality as well as in terms of a specific learning approach.
3. Depending on the field, this may involve a conceptual specification, e.g. media literacy and sustainability. This is a relatively narrow approach to interdisciplinarity in our context, primarily described along the so-called axis of functionality (empowerment/protection).
4. A fourth and slightly less common approach is to situate the object in question (media literacy) within some other field, where it is defined as a quality that makes sense of the field in question, e.g. media literacy *in* family, media literacy *in* a multicultural context.

Our analysis highlighted critical media literacy in schools as the most general and widespread focus of interdisciplinary development. As necessary, but at the same time receiving much less attention, there follow the different foci of 'civic participation', 'scientific reasoning', 'sustainability', 'multicultural contexts', 'digital literacies' and 'multidimensional literacies'. Placing these areas of close reading on this axis, the picture might look something like the one shown in Figure 1.

Looking at the texts published in the last ten years focusing on interdisciplinary media literacy, it can be seen that critical and digital approaches predominate. The so-called traditional (previously also defined as instructive) approach is relatively under-represented. This is probably the most important observation about what is happening in this field.

The debate on critical media literacy in our conceptual space is divided into two fields. Most of the discussion takes place on the empowering/critical axis, with all seven domains we have described sharing common ground with this space. Discussions on different digital media literacies and those valuing scholarship and sustainability are more represented here.

On the diagonal, this conceptual space is contrasted with the protective's traditional/instructive and descriptive space. This is where we situate, notionally, some of the texts that represent debates on civic participation and multi-dimensional media literacy. Theoretically, it is also possible to place in this space some texts that explore the role of scientific argumentation in the development of interdisciplinary media literacy. This is, above all, a possibility that is difficult to imagine, for example, in a debate focusing on cultural aspects of media literacy. The discussion on the cultural aspects of media literacy was partly placed in an instructive space, given that there are also best-practice research papers that describe solutions that work in practice.

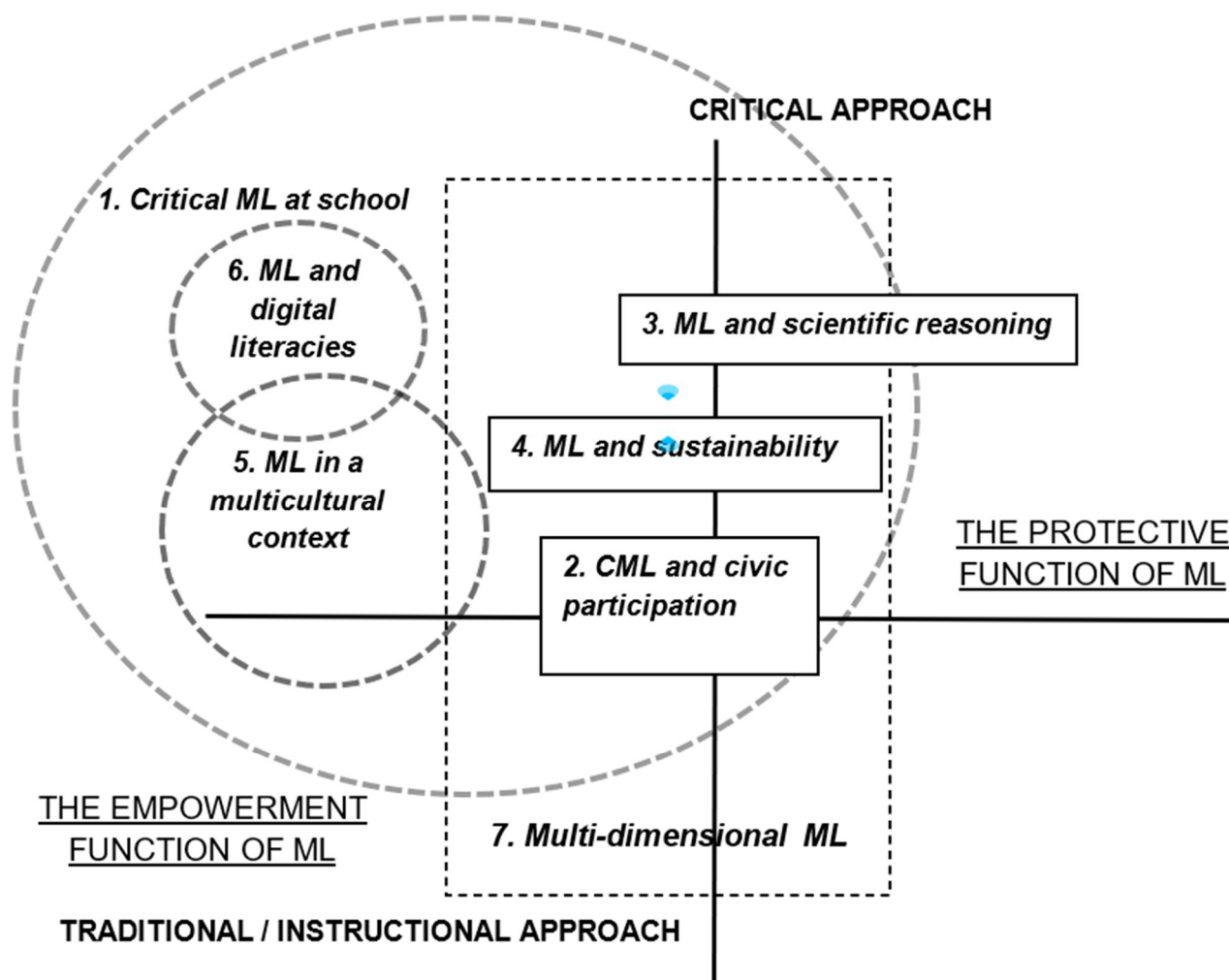


Figure 1

Looking at the other two spaces in our framework (diagonal from bottom left to top right), it is difficult to imagine that any text presenting an interdisciplinary media literacy topic could be placed solely in the critical/protective or instructive/critical framework. Both types of texts would not theoretically fit into the scientific genre. By broadening the focus of our study, it would be possible to include a variety of ideological texts and approaches, research reports with a specific focus and applied value, and bills and their justifications. In this sense, the theoretical framework presented in this report can also be seen as a universal space in which various other genres also fit in addition to scientific texts.

In the long term, it would be worth paying attention to adjacent areas that are out of focus today. These are the various philosophical aspects of media literacy which, although outside

the interdisciplinary debate, are equally important. In our framework, they potentially sit under the heading of 'multimodal media literacy' but could also potentially form a completely separate set of texts, depending on the development of technology and learning methodologies.

Find all studies and reports on [our website](#).

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Two of the reports in this deliverable will be formed into a scientific publication. Sygma will be updated accordingly.