

# **COUNTERING MISINFORMATION IN THE PUBLIC SECTOR**

**Jyväskylä University  
School of Business and Economics**

**Master's Thesis**

**2023**

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## ABSTRACT

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<b>Title</b> Countering Misinformation in the Public Sector	
<b>Subject</b> Corporate Communication	<b>Type of work</b> Master's thesis
<b>Date</b> May 2023	<b>Number of pages</b> 96 + appendices
<b>Abstract</b> <p>Misinformation is a crucial challenge to efficient public sector communication as it undermines people's trust in institutions and organizations, jeopardizing society's overall functioning (Lee, Moore, &amp; Hancock, 2023). Misinformation refers to instances where false information is shared without the intent to harm (Wardle, 2018, 3). Although there are previously conducted studies on the matter, additional research is needed in the context of the public sector to equip government officials to combat misinformation they are facing. The objective of this study is to establish what kind of phenomenon misinformation is within the context of public sector communication, with a specific focus on the communication between society and citizens. This qualitative case study employs the citizens' statements regarding the proposed legislation on Digital Identity in Finland (1) to investigate the occurrence of potential misinformation within these statements and (2) to identify the specific topics that citizens associated with their statements concerning digital identity legislation to understand the context of potential misinformation. The study adopts an interpretivist approach and employs a hybrid thematic analysis, combining deductive and inductive reasoning.</p> <p>The research data consists of 491 citizen statements gathered in the spring of 2022. A distinctive typology, that divides the misinformation based on its type and origin, was created to allow a deeper understanding of the phenomenon within the context of public sector communication. The findings indicate a significant presence of misinformation within citizens' statements, with 67% (n=491) of the statements containing misinformation. Among the various types of misinformation identified, premature conclusions and truth judgments were the most prevalent, both falling under the category of uncertain factual basis. Furthermore, the findings reveal that citizens predominantly associated negative and critical topics with their statements. The study identified the following themes: at the <i>micro level</i> (1) Resistance to Change and (2) Control &amp; Lack of Freedom, at the <i>meso level</i> (3) Data &amp; Technology Risks and (4) Public organizations and at the <i>macro level</i> (5) Democracy at Stake, (6) COVID-19 and (7) Public Finance. The co-occurrence analysis of misinformation and the themes demonstrates that the themes of COVID-19 and Public Organizations were most associated with misinformation.</p> <p>The results of the study support the notion that misinformation poses a substantial challenge for the public sector, highlighting the significance of public sector organizations in delivering accurate information transparently to citizens. Simultaneously, the findings underscore the potential harm that misinformation can cause to various features of public sector communication, particularly democracy and trust. Future research could investigate how misinformation manifests in other public sector contexts and cases, building on the typology of misinformation created in this study. Moreover, further research could aim to examine in greater detail how misinformation impacts the specific characteristics of public sector communication and identify the key factors that contribute to misinformation resilience.</p>	
<b>Key words</b> Digital Identity, Information Disorder, Misinformation, Public Sector Communication	
<b>Place of storage</b> Jyväskylä University Library	

## TIIVISTELMÄ

<b>Tekijät</b> Kallio, Viktoria & Uotila, Hilla	
<b>Työn nimi</b> Countering Misinformation in the Public Sector	
<b>Oppiaine</b> Viestinnän johtaminen	<b>Työn laji</b> Pro gradu -tutkielma
<b>Aika</b> Toukokuu 2023	<b>Sivumäärä</b> 96 + liitteet
<b>Tiivistelmä</b> <p>Misinformaatio on merkittävä haaste tehokkaalle julkisen sektorin viestinnälle, sillä se heikentää ihmisten luottamusta instituutioihin ja organisaatioihin ja voi näin vaarantaa yhteiskunnan yleiset toiminnot (Lee, Moore, &amp; Hancock, 2023). Misinformaatiolla tarkoitetaan tapauksia, joissa valheellista tietoa jaetaan, mutta tiedon jakajan tarkoitus ei ole vahingoittaa, vaan hän tekee sen tiedostamattaan (Wardle, 2018, 3). Vaikka aiheesta on tehty aiempaa tutkimusta, täydentävää tutkimusta tarvitaan, jotta viranomaiset pystyvät paremmin torjumaan kohtaamaansa väärää tietoa. Tämän tutkimuksen tavoitteena on selvittää, minkälainen ilmiö misinformaatio on julkisen sektorin viestinnän kontekstissa, ja siinä keskitytään erityisesti yhteiskunnan ja kansalaisten väliseen viestintään. Tämä laadullinen tapaustutkimus hyödyntää kansalaisten lausuntoja, jotka koskevat uutta digitaalisen identiteetin lainsäädäntöä Suomessa. Tarkoituksena on (1) selvittää, ilmeneekö kansalaisten lausunnoissa misinformaatiota ja (2) tunnistaa teemoja, joita kansalaiset liittävät lausuntoihinsa. Tutkimus omaksuu tulkinnallisen lähestymistavan ja hyödyntää induktiivis-deduktiivista temaattista analyysiä.</p> <p>Tutkimusaineisto koostui 491:stä keväällä 2022 kerätystä kansalaislausunnosta. Ainutlaatuinen typologia, joka erottelee väärän tiedon sen tyypin ja alkuperän perusteella, rakennettiin jotta misinformaatiota voidaan ymmärtää syvemmin julkisen sektorin kontekstissa. Tulokset osoittavat, että merkittävä osa (67 %, n=491) kansalaislausunnoista sisälsi misinformaatiota. Misinformaatiotyypeistä lausunnoissa havaittiin eniten ennenaikaisia johtopäätöksiä (eng. premature conclusions) ja totuudellisuuden arviointia (eng. truth judgment), joista molemmat on jaoteltu epävarman tiedon yläkategoriaan (eng. uncertain factual basis). Lisäksi havainnot paljastivat, että kansalaiset liittivät lausuntoihinsa pääasiassa negatiivisia ja kriittisiä aiheita. Tutkimuksessa tunnistettiin seuraavat teemat: <i>mikrotasolla</i> (1) muutosvastaisuus, (2) kontrolli ja vapauden menettäminen, <i>mesotasolla</i> (3) data- ja teknologiariskit, (4) julkisorganisaatiot, ja <i>makrotasolla</i> (5) demokratian heikkeneminen, (6) COVID-19 ja (7) julkinen talous. Teemojen ja misinformaatiotyypin ristiinanalysointi osoitti, että COVID-19 ja julkisorganisaatioiden teemat sisälsivät eniten misinformaatiota.</p> <p>Tutkimuksen tulokset tukevat käsitystä siitä, että misinformaatio on merkittävä haaste julkisella sektorilla, sekä korostavat viranomaisviestinnän merkitystä oikean tiedon välittämisessä läpinäkyvästi kansalaisille. Samalla tulokset tuovat esiin misinformaation mahdollisia haittoja julkisen sektorin viestinnän eri osa-alueille, etenkin luottamukselle ja demokratialle. Tuleva tutkimus voisi hyödyntää tässä tutkimuksessa rakennettua typologiaa ja tarkastella sitä, miten väärä tieto ilmenee muissa julkisen sektorin konteksteissa. Lisäksi jatkotutkimuksella voitaisiin selvittää tarkemmin, miten misinformaatio vaikuttaa julkisen sektorin viestinnän erityispiirteisiin ja tunnistaa keskeiset tekijät, jotka rakentavat resilienssiä misinformaatiota vastaan.</p>	
<b>Asiasanat</b> digitaalinen identiteetti, digitaalinen henkilöllisyys, informaatiohäiriö, julkisen sektorin viestintä, misinformaatio	
<b>Säilytyspaikka</b> Jyväskylän yliopiston kirjasto	

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# 1 INTRODUCTION

The rapid developments in the digital and communication landscape in recent decades have not only led to the expected positive transformations, such as increased democratic access to information. Instead, these transformations have created a ground for the spread of disruptive and harmful messages that contaminate our communication environment rather than foster connection (Wardle, 2019). This phenomenon, often referred to as information disorder, encompasses the intertwined concepts of misinformation, disinformation, and malinformation (Bran et al., 2021). In this study, the focus is specifically on misinformation within the context of public sector communication.

In contemporary research, public sector communication is defined as "goal-oriented communication inside organizations and between organizations and their stakeholders that enables public sector functions within their specific cultural and political settings, with the purpose of building and maintaining the public good and trust between citizens and authorities" (Luoma-aho & Canel 2020, 10). Its primary responsibility lies in promoting the welfare of citizens (Luoma-aho & Canel, 2020). However, misinformation poses a significant challenge to effective public sector communication as it erodes people's trust in institutions and organizations, thereby jeopardizing the proper functioning of society as a whole (Lee, Moore, & Hancock, 2023). In brief, misinformation refers to false information that is inadvertently disseminated and is typically spread without malicious intent (Wardle, 2018). Notably, the prevalence of misinformation has witnessed a considerable rise in our society in recent years (Osman et al., 2022). Such is the impact of this phenomenon that in 2018, the online dictionary Dictionary.com selected "misinformation" as the word of the year, underscoring its widespread influence on various aspects of our society (Dictionary.com, 2018). The urgency of addressing the phenomenon is further highlighted by initiatives like the DIS/MIS Resource Hub established by the OECD, which aims to mitigate the impact of misinformation on society (OECD, 2023), and the Coronavirus Misinformation Tracking Center launched by UNESCO (UNESCO, 2023).



In order to effectively counter misinformation, gaining a deeper understanding of it as a complex phenomenon is crucial. Previous research has explored misinformation in various contexts, including democracy (eg., Wardle & Derakhshan, 2017; Reglitz, 2022), politics (eg., Lee & Jang, 2022; Nisbet et al., 2021), citizens' health and well-being (eg. Hansson et al., 2021; Germani et al., 2022), and digital technologies (eg., Wilner, 2018). However, despite the existing research on misinformation, there is a recognized need for further exploration of this phenomenon in order to develop effective strategies for misinformation resilience (eg., Pérez and Canel, 2023; Bran et al., 2021). Additionally, there is a call for more research to understand how misinformation manifests in different contexts and within the natural communication environment of citizens. (Ruokolainen, 2022; Ruokolainen et al., 2023.) Moreover, the development of new typologies of misinformation specific to various contexts has been identified as an important area of investigation. Employing context-specific typologies can enhance our understanding of misinformation, enabling a more comprehensive examination of the potential risks it presents. (Ruokolainen et al., 2023.)

While considerable attention has been given to misinformation, research within the realm of public sector communication remains relatively limited. The primary aim of this research is to fill this gap by gaining an understanding of the phenomenon of misinformation within the context of public sector communication, with a specific focus on the communication between society and citizens. Furthermore, this study seeks to develop a distinctive typology of misinformation that can be effectively applied within the public sector. This case study focuses on investigating the potential occurrence of misinformation within citizens' statements regarding digital identity legislation. These statements were collected during the spring of 2022 through the publicly accessible platform *lausuntopalvelu.fi.*, a website administered by the Ministry of Justice that presents an opportunity for all public authorities to request an opinion on a matter and for all organizations, associations, and citizens to give their opinion on an issue (Ministry of Justice, 2023). The examination of citizen statements offers an opportunity to investigate the occurrence of misinformation within the authentic communication environment that exists between citizens and society. Defined as "all of the information relating to one's self in a digital format" (Ministry of Finance, 2023), digital identity is part of the larger, transnational European Digital Identity Wallet project by the European Commission (Digital and Population Data Services Agency, 2023). The research questions are specified as follows:

**RQ1:** Does misinformation occur in citizens' statements on digital identity legislation?

**RQ2:** What kinds of topics did citizens link to their statements on the digital identity legislation?

This study is structured as follows: First, the concept of misinformation and its related concepts are presented. Second, public sector communication is discussed

through the concepts of democracy, trust, organizational legitimacy, transparency, politics, and policy. Third, the research's methodological choices and philosophical background are introduced. Fourth, the results of the analysis are presented, and finally, conclusions, theoretical and managerial implications, and suggestions for future research are discussed.

In this study, artificial intelligence applications (Grammarly, QuillBot) were employed to verify the language used in the research and rectify any spelling errors, ensuring the fluency of the study.

## **2 MISINFORMATION**

This chapter introduces the different definitions of misinformation and explores the causes, influences and impacts of misinformation. Following that, the most common strategies for preventing misinformation are presented and discussed. Lastly, the concepts around misinformation are displayed and the different types of misinformation presented.

### **2.1 Defining misinformation**

Misinformation is a term used to describe false information that is being distributed mistakenly and without the intention to harm (Wardle, 2018, 3). Misinformation is not a new phenomenon but rather an age-old human problem that has increased due to social media and its rapid information environment (Johar, 2022). Therefore, it is a timely issue to examine.

#### **2.1.1 The causes of misinformation**

Misinformation's leverage lies in the fact that it is information that is false, but people accept it as the truth (Cook, Lewandowsky, & Ecker, 2017). This leads to people sharing the said information as the truth and involuntarily spreading false information – i.e., misinformation (Wardle & Derakhshan, 2017). The people who spread this information believe that it is true and hence do not see anything wrong with spreading it (Ireton & Posetti, 2018), but rather use the information as facts to the best of their knowledge. This leads to a chain reaction that causes misinformation and enables its spreading (Figure 1).

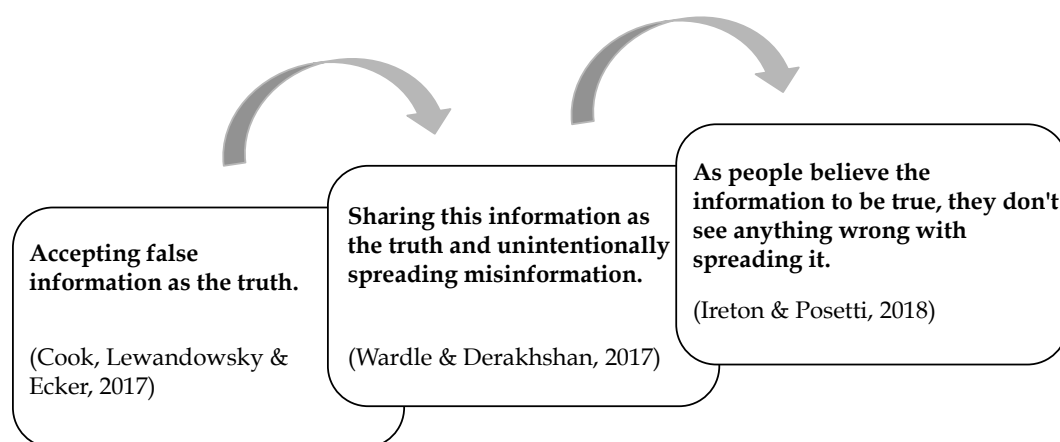


FIGURE 1. The progression of misinformation.

Another cause of misinformation occurs in instances where the individual has been exposed to accurate information via external sources such as news, but biases in their memories lead to misremembering the information (Coronel, Poulsen, & Sweitzer, 2020). This portends that, to an extent, people tend to rely more on their memory than on external sources portrayed as credible in society. According to Chaxel (2022), in order to truly internalize new information, individuals need to make coherent associations between prior knowledge and the new information they receive and encounter in their daily lives. This phenomenon can be called the truth judgment. Truth judgments are people's impressions about the truthfulness of statements (Chaxel, 2022). According to Chaxel and Laporte (2021), the truth, or "facts", are not as essential as one might think in forming an opinion about an issue, but the formulation of truth judgments resembles the formulation of beliefs about subjective dimensions, e.g., liking. Hence, some researchers have defined misinformation as information that is false or defective and is different from the general knowledge backed by evidence and the opinions of experts (Malhotra, Scharp, & Thomas, 2022; Guess & Lyons, 2020; Lewandowsky et al., 2012; Nyhan & Reifler, 2010).

As well as Chaxel and Laporte (2021), Stanley et al. (2022) also suggest that the belief systems of humans are more complex and tend to emphasize other factors rather than just "sticking to the facts". According to Stanley et al. (2022), there are four fundamental cognitive principles that underlie the belief system of humans. These principles are: (1) the truth bias, (2) the bias to extract meaning from information, (3) the bias to rely on the source of information to judge truth and (4) the bias to rely on fluency to judge truth. The truth bias means that humans tend to believe all information they encounter to be true. The bias to extract meaning from information means that it is typical for humans to reflect their prior expectations when trying to comprehend new information they

receive. The bias to rely on the source of information to judge truth means that people judge the source's credibility when rating the truthfulness of the information. Finally, the bias to rely on fluency to judge truth means that people's truth judgments are accepted based on how easy the information is to process. (Stanley et al., 2022). Thus, we can conclude that research shows that the causes of misinformation are more complex than one might think. People who support arguments that contain misinformation struggle to change their initial attitudes and beliefs and question them later on (Chan et al., 2017). On this account, misinformation is hard to prevent and control since it requires not only stating the facts to those who believe it but also convincing them that their prior knowledge is false.

Lewandowsky et al. (2012) have identified four different and most common sources of misinformation. These sources are rumors and fiction; governments and politicians; vested interests and NGO's; and the media. Rumors and fiction are known to be effective ways to spread misinformation. According to the study conducted by Lewandowsky et al. (2012), people tend to rely on information that arouses emotional reactions in the recipients, regardless of its truth value. This supports the claim that rumors and fiction are a major cause of misinformation in our society. Another source of misinformation, according to Lewandowsky et al. (2012), are governments and politicians. As politicians often act as the front men of society and portray a sense of credibility, misinformation coming from them might be hard to detect as false. The third source of misinformation Lewandowsky et al. (2012) present in their research is vested interests and nongovernmental organizations. They claim that corporate interests have a history of influencing public debate by promoting false information. This phenomenon can be seen especially in policies that could regulate or burden certain industries. The final cause of misinformation Lewandowsky et al. (2012) mention in their research is the media. Since people generally obtain their information from the media, the media serves as a platform for the spreading of misinformation. Some explanatory reasons for this are that the media can simplify, misrepresent, or overdramatize scientific results. In addition to this, it is typical to present a balanced story in journalism, which includes investigating both sides of the story. The outcome of this kind of balanced story might end up being misleading and spreading further misinformation. (Lewandowsky et al., 2012)

### **2.1.2 The influences and impacts of misinformation**

The costs of misinformation cannot be ignored as its widespread persistence continues (Lewandowsky et al., 2012). Misinformation as a phenomenon in society becomes increasingly visible during societal crises such as the COVID-19 pandemic (Osman et al., 2022), the HIV epidemic, or the fight against climate change (Cook et al., 2017). The amount of misinformation has widely expanded in recent years (Osman et al., 2022), and it threatens society as it has the capacity

to influence beliefs and behaviors (Lewandowsky et al., 2012). According to Cook et al. (2017), misinformation risks significant societal consequences as it can weaken a well-functioning democracy. If most people believe something factually incorrect as the truth, it could act as the basis for political and societal decisions that are against the best interests of society and its individuals and thus have severe consequences (Lewandowsky et al., 2012). Misinformation influences the personal and societal decisions we make in damaging ways (Sangalang, Ophir, & Cappella, 2019) and is thus a large-scale issue facing society.

Sangalang et al. (2019) claim in their research that even when people accept corrective information, it is possible that misinformation keeps influencing their attitudes. Therefore, misinformation can have long-lasting effects on society. Researchers have come up with different theories to explain this phenomenon. Such theories include, e.g., belief echoes and the continued influence effect. Situations where the corrective information echoes back instead of eliminating the prior false information can be described as belief echoes (Sharevski et al., 2022). This occurs, for example, in the context of politics. When a person hears something damaging about a political candidate but still, after hearing the corrective information, believes that the accusations emerged only because of the candidate's untrustworthiness, the misinformation harms the candidate even after retraction efforts (Sharevski et al., 2022). A similar phenomenon to this is the continued influence effect, which describes situations where people keep being influenced by misinformation even after they learn that the information is false (Lewandowsky et al., 2012). Some researchers have explained this phenomenon by citing feelings of discomfort. According to Susmann and Wegener (2022), the retraction of misinformation can bring out feelings of psychological discomfort in people that lead them to disregard the contraction in order to ease the feeling of this discomfort.

### **2.1.3 The strategies for preventing misinformation**

The increase and spread of misinformation require behavioral interventions that can control its influence in society (Chaxel, 2022). This claim is backed by Cook et al. (2017), as they suggest that the behavioral and societal consequences of misinformation highlight the importance of improving our understanding of how misinformation could be corrected, and its impacts reduced.

For preventing misinformation, it is necessary to understand how people perceive it (Osman et al., 2022). It is impossible to prevent or control the effects of misinformation if you don't understand how people understand it and how they form impressions based on the information that is spread to them. Osman et al. (2022) claim that some people understand misinformation to be information that is factually based, but there are actually misinformation components that are included in the information that make it fabricated and present it in a way that is misleading. Research conducted by Osman et al. (2022) introduces the three most common understandings of misinformation. The first one introduces information that has no factual basis, but people draw conclusions based on the information.

An example of such a situation would be hearing false statistics on an issue and drawing conclusions based on this false information. Another type of misinformation Osman et al. (2022) introduce is information that is factual and correct, but the conclusions are exaggerated in a way that makes the information false. This can happen in situations where hasty conclusions are made based on factual basis, but the conclusions make the outcome false. The third understanding of misinformation that Osman et al. (2022) present in their study is information that is vaguely relying on facts or there is uncertainty about the factual basis of the information, but people are still making conclusions based on this information. This can happen when a person sees, e.g., a video about an issue but does not know the source and continues to use the information from the video as facts. (Osman et al., 2022).

Understanding how people perceive misinformation is essential for preventing it. However, strategies for preventing misinformation are difficult to form as the causes of misinformation are very complex. According to Cook et al. (2017), a distortion between a person's worldview and the facts presented by scientists can lead to further entrenched misconceptions. In addition to this, Coronel et al. (2020) claim that even if all external sources distribute accurate numerical information, it is possible for people to self-generate misinformation. That is why, in order to prevent misinformation, it is essential to approach the issue correctly.

Chan et al. (2017) introduce three recommendations for debunking misinformation in their research. These recommendations include reducing the production of arguments that are in line with the misinformation, creating conditions that ease observation and counter argumentation of misinformation, and correcting misinformation with additional detailed information without expecting much. According to the research, preventing and controlling misinformation can be successful when policymakers report misinformation occurrences in a way that decreases support for the said misinformation. This could be done, for example, with a retraction report. According to the researchers, debunking misinformation can also be done by counter-arguing the misinformation, and research shows that this enhances the power of corrective efforts. In practice, this means that people should be taught proper media literacy by correcting the false information by counterarguing. The third recommendation Chan et al. (2017) introduce in their research is that when debunking misinformation, additional information should be provided to the public. This has been found to be more effective than just declaring information as misinformation without giving out any additional information regarding the subject. However, the researchers emphasize that expectations should be kept low because debunking efforts may not always operate as expected. (Chan et al., 2017).

Lewandowsky et al. (2012) have also come up with three techniques for reducing misinformation in their research. These techniques include preexposure warnings, repeated retractions, and providing an alternative narrative. Preexposure warnings are meant to explain to the viewer that the information

they are seeing might be misleading. Lewandowsky et al. (2012) emphasize, as another technique, the repetition of retracting efforts. The claim that retractions regarding misinformation should be repetitive and resistant. Similar to Chan et al. (2017), Lewandowsky et al. (2012) suggest as a third recommendation that when debunking misinformation, it is necessary to provide additional information on why the previous information was false by creating an alternative narrative. As presented earlier, people tend to believe information that evokes emotions in the recipients (Lewandowsky et al., 2012). Thus, when debunking misinformation, it could be effective to utilize narrative corrections when creating an alternative narrative. Narrative corrections include the corrective efforts inside a narrative, possibly an emotion-awakening story that makes the information easier to internalize (Sangalang et al., 2019).

While many strategies focus on the correction of misinformation when it is already a problem, there are strategies that aim to prevent the misinformation from forming in the first place - i.e., prebunking efforts. A commonly known theory for prebunking misinformation is the inoculation theory. The inoculation theory was developed by William McQuire in 1961 to build up resistance against misinformation and unwanted persuasion (Lewandowsky & Linden, 2021), as a medical inoculation can make the human body more immune to future influences (Compton, Wigley, & Samoilenko, 2021). The basic principle of inoculation theory is that people are more likely to be immune to misinformation if they have been forewarned about the possibility of being misled and provided with examples of this kind of misinformation (Lewandowsky & Linden, 2021). In practice, the inoculation theory is composed of two basic principles: 1) a warning to help and motivate resistance, and 2) refutational preemption (Lewandowsky & Linden, 2021). Thus, inoculation theory encourages dialogue between the participants and spurs a discussion about multi-perspective issues (Compton et al., 2021). This kind of two-way communication could also be utilized in public sector communication to make citizens more immune to being misled.

While multiple strategies have been presented for the prevention of misinformation, the issue is diverse, and corrective efforts and utilized strategies need to be assessed independently, case by case.

## **2.2 The concepts around misinformation**

When examining misinformation, it is important to understand the concepts around it to acknowledge the differences and similarities between them. Figure 2 aims to present the relevant concepts around misinformation and the placement of misinformation in regard to them.



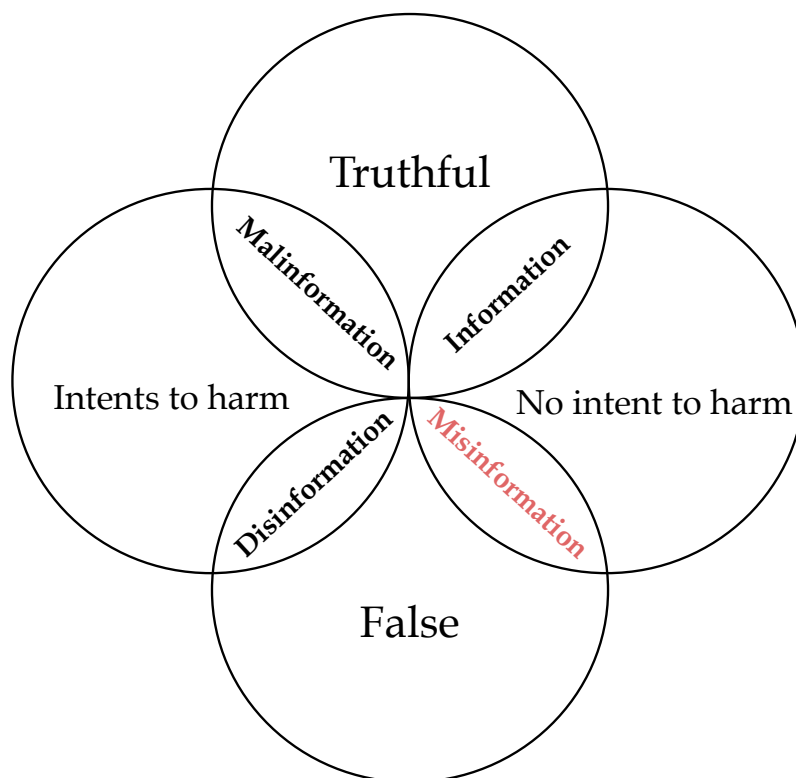


FIGURE 2. Misinformation and related concepts.

According to Osman et al. (2022), most people mix the definitions of misinformation and disinformation. As mentioned, to fully understand the phenomenon of misinformation, it is necessary to understand the concepts around the subject, - this includes disinformation. Disinformation means instances where false information is shared deliberately as a way to cause harm (Wardle & Derakhshan, 2017). This means that, like misinformation, disinformation is false information, but unlike misinformation, it is intentional. The European Commission defines disinformation as "the creation, presentation, and dissemination of verifiably false or misleading information for the purposes of economic gain or intentionally deceiving the public, and which may cause public harm" (European Court of Auditors, 2020, 4). Disinformation may also have the intention to influence the policies or opinions of its recipients when conveyed by, e.g., a government to the media (Oxford English Dictionary, 2020). Thus, disinformation imposes a risk in society for broader public issues and division. The general public tends to define misinformation as scholars define disinformation (Osman et al., 2022). This highlights that the two are not separated but are perceived as the same by many people.

The biggest difference between disinformation and misinformation is that misinformation is not intentional (Stahl, 2006). However, the two do connect with each other. It is possible that information that was primarily intended as disinformation turns into misinformation (Wardle, 2019). This happens when a message is sent with the intention to harm, but the receiver of the message believes it to be true and continues to spread false information unintentionally (Cook, Lewandowsky, & Ecker, 2017). Even though mis- and disinformation are

connected, disinformation and the intentions behind it are difficult to prove. Thus, in this thesis, we focus on misinformation.

Malinformation means using authentic information to cause harm by sharing private information in the public sphere (Wardle & Derakhshan, 2017). Unlike misinformation, malinformation is intentional, and unlike disinformation, malinformation uses genuine information. Malinformation can be used on a societal level when information is used to harm an organization or a country (Ireton & Posetti, 2018). This can happen if confidential information is shared to undermine the reliability of, e.g., a government official.

Fake news means articles that contain intentional false information and aim to mislead the readers (Allcott & Gentzkow, 2017). Thus, fake news and disinformation are similar, but one could argue that fake news is a type of disinformation. Scholars have defined fake news to include six types: (1) news satire, (2) news parody, (3) fabrication, (4) manipulation, (5) advertising, and (6) propaganda (Tandoc et al., 2017).

TABLE 1. The relevant concepts of the research and their relations.

Concept and discipline	Definition	Process	Impact	Goal
<b>Misinformation</b> <i>Politics &amp; Society</i>	"False information that is shared mistakenly and without the intent to harm is best described as misinformation" (Wardle, 2018, 3)	Mistakenly and without the intent to harm	False information is shared	
<b>Misinformation</b> <i>Politics &amp; Society</i>	"Mis-information is when false information is shared, but no harm is meant." (Wardle & Derakhshan, 2017, 20).	No harm is meant	False information is shared	
<b>Misinformation</b> <i>Communications</i>	"Misinformation: instances in which individuals are exposed to accurate information from an external source (e.g., news websites), but biases inherent in memory cause them to misremember information." (Coronel, Poulsen & Sweitzer, 2020, 27)		Biases inherent in memory cause misremembering of information	
<b>Misinformation</b> <i>Climate Change Communication</i>	"Misinformation, that is, information that people accept as true despite it being false" (Cook et al., 2017)		People accept false information as true	
<b>Misinformation</b> <i>Journalism</i>	"Misinformation is information that is false, but the person who is disseminating it believes that it is true." (Ireton & Posetti, 2018, 46)		Person disseminates false information believing it is true	
<b>Misinformation</b> <i>Communications</i>	"Scholars have defined misinformation as false or erroneous information that differs from common understandings of facts backed up by evidence and expert opinion." (Malhotra, Scharp & Thomas, 2022; Guess & Lyons, 2020; Lewandowsky et al., 2012; Nyhan & Reifler, 2010)			
<b>Disinformation</b>	"The dissemination of deliberately false information, esp. when supplied by a government	Intentionally	Dissemination of deliberately false	With the intention of

	or its agent to a foreign power or to the media, with the intention of influencing the policies or opinions of those who receive it; false information so supplied. Cf. black propaganda." (Oxford English Dictionary, 2020)		information	influencing the policies or opinions
<b>Disinformation</b> <i>Politics &amp; Society</i>	" <b>Dis-information</b> is when false information is knowingly shared to cause harm." (Wardle & Derakhshan, 2017, 20).	Knowingly	Sharing of false information	To cause harm
<b>Disinformation</b> <i>Society, Politics &amp; Finances</i>	"The European Commission defines disinformation as the creation, presentation and dissemination of verifiably false or misleading information for the purposes of economic gain or intentionally deceiving the public, and which may cause public harm." (European Court of Auditors, 2020, 4)	Intentionally	Creation, presentation and dissemination of verifiably false or misleading information	Economic gain, intentionally deceiving the public, causing public harm
<b>Malinformation</b> <i>Journalism</i>	"Information, that is based on reality, but used to inflict harm on a person, organization or country. An example is a report that reveals a person's sexual orientation without public interest justification." (Ireton & Posetti, 2018, 46)	Without public interest justification	Harm is caused on person, organization or country	Truthful information is used to inflict harm
<b>Malinformation</b> <i>Politics &amp; Society</i>	" <b>Mal-information</b> is when genuine information is shared to cause harm, often by moving information designed to stay private into the public sphere" (Wardle & Derakhshan, 2017, 20).		Moving information designed to stay private into the public sphere	Genuine information is shared to cause harm

### 2.2.1 Misinformation as information influencing

According to Pamment, Nothhaft, and Fjällhed (2018), information influencing regards to actions that include potentially harmful forms of communication that aim to undermine trust between a state and its citizens. Information influencing can be seen as a phenomenon that utilizes disinformation systematically to its benefit. Information influencing is not about having different opinions from government officials but the systematic usage of deceptive techniques to weaken democracy (Pamment et al., 2018).

Pamment et al. (2018) have created a handbook for Swedish officials to counter, identify, and understand information influencing. The handbook's aim is to prepare government officials for information influencing and to increase the social resilience of Swedish society to information influencing. According to the handbook, information influencing actions can be divided into three categories: deceptive, intentional, and disruptive. Deceptive actions are actions that are deliberately misleading despite the communication being reliable, transparent, and open. Intentional actions are actions that intend to interfere with constructive conversations and sabotage the open debate. The disruptive actions aim to prevent democratic dialogue from happening in society and undermine the core functions of democracy.

Information influencing is systematic and it has a clear objective to harm society (Pamment et al., 2018), and hence is not directly misinformation. However, the terms are still affiliated with one another. As the actions of information influencing are starting to be seen in society, the spread of this originally intentional false information keeps spreading unintentionally. Information influencing enables the spread of misinformation on a large scale. It is essential to identify the information influencing decisions in order to have any control over the misinformation happening at a societal level.

### 2.3 The types of misinformation

Misinformation is a vast phenomenon that appears in many different forms. By reason of previous literature and theories, the misinformation can be divided into categories and subcategories according to the nature of the information. Since the phenomenon is multi-dimensional, it is important to conceptualize it to counter it properly. To accurately counter misinformation, it is essential to identify what type of misinformation is being faced and what the best retraction efforts are for that specific type of misinformation. Figure 3 below illustrates the said typology of misinformation and aims to ease the approach to the subject by providing narrower subcategories.

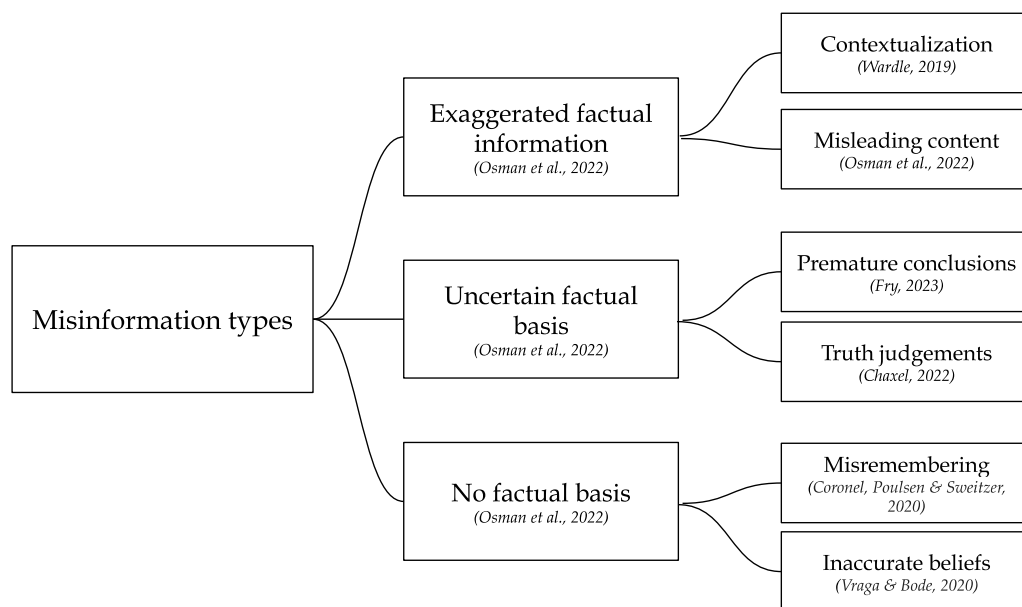


FIGURE 3. Misinformation's categories and subcategories.

The division of misinformation types adapts the categorizing originally done by Osman et al. (2022) to divide misinformation types according to the type of information it is based on. As covered previously, the categories Osman et al. (2022) present are exaggerated factual information, uncertain factual basis, and

no factual basis. As visible from Figure 3, the division then furthers into subcategories present in each type.

The subcategories found for exaggerated factual information are contextualization and misleading content. Contextualization means that the information is initially created on a factual basis and its contents are genuine, but it is used in a context that reframes it to contain false elements (Wardle, 2019). Contextualization can be hard to detect as it contains genuine content. An example of contextualization is when a real picture or statistic is used out of context to prove something the original content does not apply to (Wardle, 2019). Another form of exaggerated factual content is misleading content. Like contextualization, misleading content has a factual basis. Misleading content is factually based but includes misinformation components that present it in a misleading way and make it fabricated (Osman et al., 2022). Examples of such situations are when reframing stories or using a fragment of a quote to support a wider perception (Wardle, 2019).

For statements based on an uncertain factual basis, two subcategories were identified in this research. These subcategories are premature conclusions and truth judgments. Premature conclusions mean conclusions drawn from incomplete investigations (Fry, 2023), and the factual basis of the information is uncertain. An example of this is when people find causal relations between subjects without any factual basis and treat these outcomes as the truth. Another form of misinformation that is based on an uncertain factual basis is a truth judgment. As previously mentioned, truth judgments are people's associations between prior knowledge and the information they receive, and this affects how they internalize new information (Chaxel, 2022). In practice, this means situations where prior experience precludes a person from believing new information.

The final category of misinformation presented by Osman et al. (2022) is misinformation that has no factual basis. The subcategories for such information are misremembering and inaccurate beliefs. Misremembering occurs when a person has been exposed to factual information but, inherently, the biases in their memories distort the said information (Coronel, Poulsen, & Sweitzer, 2020). When the information is misremembered, it becomes false and thus has no factual basis. Another source of non-factual information is inaccurate beliefs. Inaccurate beliefs contain information that is contrary to the updated and most recent evidence provided by relevant experts (Vraga & Bode, 2020). An example of such a situation is when a person makes a statement that is clearly against the results of scientific research and the opinion of experts. To understand the phenomenon of misinformation better and to find the right approach to countering it, it is essential to identify the different types of misinformation that appear in our society. To do this, it is necessary to create new typologies that examine the phenomenon in a specific context (Ruokolainen et al., 2023).

### **3 PUBLIC SECTOR COMMUNICATION**

This chapter provides a definition of public sector communication and explores it within a societal framework through the concepts of democracy, organizational legitimacy, trust, transparency, politics and policy. Finally, this chapter summarizes the important definitions and perspectives that have been discussed.

#### **3.1 Defining public sector communication**

Universally, the primary goal of public sector communication is to promote the well-being of citizens. Nevertheless, the implementation of this goal is complicated by the diverse nature of public sector organizations around the world, which are influenced by their unique socio-political heritage and the culture of the society they serve. Thus, the practical application of public sector communication is a complex and culturally dependent matter. (Luoma-aho & Canel, 2020.) Traditional theoretical conceptualizations view communication in public sector organizations as either a management process or a transaction of information. Contemporary research has replaced traditional perspectives with a more citizen-centric approach that recognizes communication as a pivotal factor in the functioning of public organizations. This approach views communication as a potent force capable of enhancing the organization's intangible assets and fostering beneficial co-creation. As a result, communication is accorded a more comprehensive and critical role in the operation of public organizations. (Canel & Luoma-aho, 2019; Bourgon, 2009). This study adopts the following citizen-centric definition of public sector communication: "goal-oriented communication inside organizations and between organizations and their stakeholders that enables public sector functions, within their specific cultural/political settings, with the purpose of building and maintaining the public good and trust between citizens and authorities" Luoma-aho and Canel (2020) have proposed a conceptual framework for public sector communication at the societal level, which incorporates the concepts of democracy, organizational legitimacy, trust, transparency, politics and policy. Given the

focus of this study on the interaction between society and its citizens, these characteristics provide a suitable foundation for investigating public sector communication from a societal perspective.

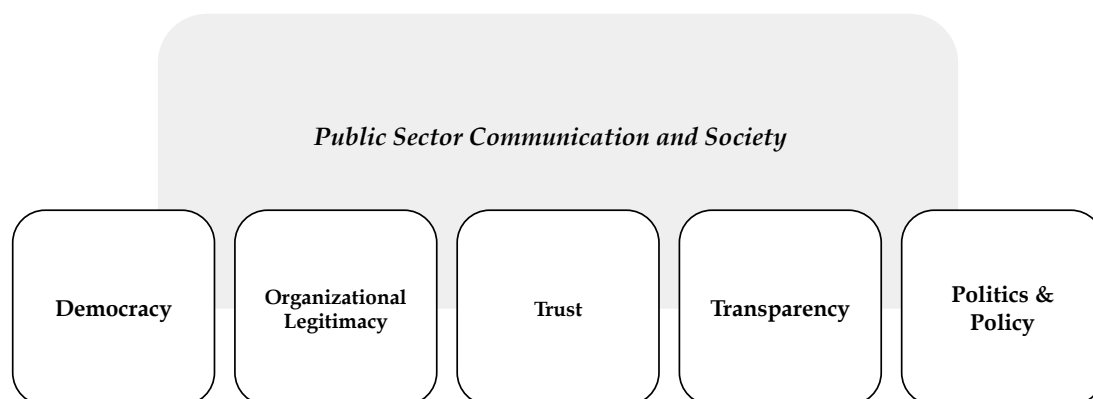


FIGURE 4. Characteristics of public sector communication in societal level. Adapted from Luoma-aho & Canel (2020).

The following sections cover the concepts of democracy, organizational legitimacy, trust, transparency, politics and policy whilst examining their theoretical underpinnings and their relationship to public sector communication and society more broadly.

## 3.2 Characteristics of public sector communication

### 3.2.1 Democracy

Democracy, a form of government that first appeared in ancient Greece, has its origin in Greek words *demos* (the people) and *kratos* (rule) referring to “rule by the people” (Harrison, 1993). The manifestation of democracy varies globally, shaped by the unique socio-historical and cultural contexts of each country (Dahl, 1989) and at large, there is no consensus about its definition (Coppedge et al., 2011). However, rooting in the Greek origin of the word, Andrew Heywood (2003) defines democracy as “rule by the people; democracy implies both popular participation and government in the public interest, and can take a wide variety of forms”. Giving a measurable approach to democracy, on the other hand, Robert Dahl presents a set of criteria by which the democratic process can be evaluated: voting equality, effective participation, enlightened understanding, control of the agenda and finally, inclusion. These criteria provide a framework through which the democracy of a country can be assessed. (Dahl, 1989.)

The strengthening of democratic processes has been critical in recent years, as the erosion of democracy has become a worldwide concern (Freedom House, 2023). The opposite of democracy is often regarded as authoritarianism (Glasius, 2018) or tyranny (Hoekstra, 2016), where, instead of public authority, power is concentrated on a few through strong central control. According to the latest edition of Freedom House's annual report, "Freedom in the World," there has been a global deterioration in democracy over the past 15 years, leading to a significant democratic gap among nations. The world has witnessed uncertain times and faced various crises, which have disrupted the balance of power on a global scale and allowed the rise of tyranny and authoritarianism. While the 2022 report reflected the worst state of democracy, there have been slight improvements noted in the 2023 report. These improvements can be attributed to factors such as the presence of more competitive elections and the easing of COVID-19 restrictions. The year 2022 can be seen as a potential turning point for democratic development, highlighting the need for dedicated efforts to ensure the progress towards a more democratic and free world continues. (Freedom House 2023.)

For public sector communication democracy is crucial as it allows communication to serve public interests and needs. In a democratic system, public organizations are accountable to the citizens, and public sector communication is essential when informing citizens about government politics, policies and services. (Carpini, 2020.) However, according to Carpini (2020), the role of citizens in the public sector should be viewed above all as discursive, and democracies differ significantly in terms of the significance given to citizens' voices in the public sector. In this study, democracy is approached particularly from a deliberative point of view, which means "mutual communication that involves weighing and reflecting on preferences, values, and interests regarding matters of common concern" (Mansbridge, 2015, 29). Deliberative democracy is understood as "a form of government in which free and equal citizens (and their representatives), justify decisions in a process in which they give one another reasons that are mutually acceptable and generally accessible, with the aim of reaching conclusions that are binding in the present on all citizens but open to challenge in the future" (Gutmann & Thompson, 2004, 7). Carpini (2020) states how the relationship between democracy and the public sector varies according to the levels of citizen participation. First, implementing public sector communication in a democracy requires institutional structures that allow citizens to participate in decision-making. Secondly, if democratic public sector communication is desired, citizens should be actively participating in public debate and decision-making. Thirdly, if the ultimate goal is not simply democratic public sector communication but democratic public sector as a whole, the public sector should be directed at deliberation. (Carpini, 2020).

Drawing on the ideas of both Dahl and Carpini, deliberative democracy can be considered a high level of democracy given its emphasis on participation and inclusiveness. The roots of deliberative democracy lie in Jurgen Habermas's (1989) theories of communicative rationality and the public sphere. A



deliberative approach to democracy examines democracy primarily from a communicative point of view, where the goal of engaging citizens is on discussion and dialogue rather than just voting behavior or policy outcome. The idea behind deliberation is that citizens should be involved in every step of decision-making, from initial research to policy setting. (Chambers, 2003.) Thus, communicative processes are the base of deliberative democracy, including a variety of arenas and occasions such as informal meetings for election campaigns and global public debate in the media. Fundamentally, this approach to democracy considers that better governance and decision-making are created through dialogue, inclusion, diverse connections and participation. (Gastil 2007, 183-186.)

The debate and discussion required for deliberative democracy takes place in the public sphere. Habermas defines public sphere as a “realm of our social life in which something approaching public opinion can be formed”. In the public sphere, all citizens must be guaranteed access to the formation of public opinion. (Habermas, 1989.) During the past decades, digitalization and social media have significantly reshaped the public sphere and, at the same time, the ways citizens engage in political debate and discussion. It is undeniable that social media has created new opportunities for citizen engagement, inclusion and participation in democracies. (Chambers 2020).

However, while deliberation has many potential benefits for public organizations, it should not be simply idealized. Critics have claimed deliberative democracy for being exclusive for commonly marginalized groups, as participation in deliberative discussions requires resources and social capital, such as education and networks. (Bächtiger et al., 2018.) Moreover, in deliberative processes, elites or experts may dominate the agenda or policy outcome without real engagement with the citizens (Chambers, 2017). Furthermore, coordinating deliberative processes in a representative democracy is challenging (Ryfe, 2005). In order to truly use the potential of deliberation, deliberative practices should be institutionalized and, on the other hand, the institutions and structures that support deliberative democracy should be designed with critical reflection (Rosenberg, 2007).

### **3.2.2 Organizational legitimacy**

For an organization, legitimacy is crucial to gaining support from stakeholders, establishing continuity (Ashforth & Gibbs, 1990; Suchman 1995), and ultimately ensuring its existence (Meyer & Rowan, 1977). Organizational legitimacy is defined as “the perceived appropriateness of an organization to a social system in terms of rules, values, norms, and definitions” (Deephouse et al., 2018, 9). Suchman (1995) points out that legitimacy is socially constructed, as it seeks congruence between the actions of an organization seeking legitimacy and the beliefs of a particular social group. Moreover, Dowling & Pfeffer (1975) suggest that an organization achieves legitimacy when its values and actions and the norms of its wider operating environment are congruent. Therefore, for an

organization seeking legitimacy, it is essential to strive for the approval of stakeholders considering the surrounding socially accepted motives, social rules and standards.

The legitimacy of organizations, particularly in the public sector, relies heavily on social judgments (Ashforth & Gibbs, 1990). In the public context, these judgments carry significant socio-political implications. For instance, public organizations are expected to utilize resources responsibly, without engaging in corruption or exhibiting favoritism or discrimination towards specific social groups. Failing to meet these citizens' expectations can lead to a cycle of skepticism, decreased willingness to pay taxes, and even jeopardize the organization's continuity (Wæraas, 2020). On the other hand, during global crises such as the COVID-19 pandemic, legitimacy can also be viewed as the ability of leaders to inspire citizens to adhere to public orders and recommendations. The legitimacy of public health regulations has played a critical role for governments in managing the pandemic (Khemani, 2020).

Without legitimacy, it is challenging, if not impossible, for public sector communication to function effectively, as the public sector needs support and approval for its actions from its stakeholders. *Legitimacy gap* is defined as a situation where the organization's actions differ significantly from society's expectations towards organizations (Sethi, 1975). Another expression used for the lack of legitimacy is illegitimacy. Illegitimate actions are more likely to be noticed than legitimate actions, and they tend to lead to negative reactions from stakeholders. (Pfeffer and Salancik, 1978.) Hence, lack of legitimacy may pose a significant threat to the organization. An organization without legitimacy may face budget cuts, as its actions are seen to have no purpose. Thus, the whole meaning of their existence, effectiveness and impact on society can be questioned. (Wæraas, 2020.)

Suchman (1995) distinguishes three types of organizational legitimacy, including pragmatic, moral and cognitive legitimacy, all of which differ from each other in terms of the inherent behavioral dynamics. To begin with, *pragmatic legitimacy* often refers to the direct exchange between the organization and stakeholders, but it can also be related to broader social, political and economic interactions where the organization's actions clearly affect the stakeholders and their well-being. Related to this type of legitimacy is the idea of stakeholders as constituencies, which give a mandate to the organization, which in turn should thus support the interests of these stakeholders. *Moral legitimacy*, on the other hand, is not so much related to the pursuit of interests as perceived by the stakeholders, but to social judgments about whether the organization's actions are morally right, i.e. whether they support the stakeholders' core values and views on effective ways to build society and well-being. Finally, in *cognitive legitimacy*, two forms can be distinguished, one based on comprehensibility and the other taken-for-grantedness. In legitimacy emphasizing comprehensibility, the social environment is seen as chaotic, and the legitimacy of an organization is defined by its ability to offer comprehensible explanations and meanings for the organization's activities. Taken-for-granted legitimacy instead refers to the

most subtle and powerful form of legitimacy, where organization not only makes the chaotic understandable but also makes the possibility of disagreement impossible or unthinkable. Thus, the organization becomes unassailable and its legitimacy permanent. (Suchman, 1995.)

The legitimizing processes vary also depending on the perspective from which legitimacy is approached. Wæraas (2020) presents three central standpoints on organizational legitimacy: institutional, strategic and discursive legitimacy. First, the *institutional perspective* on legitimacy emphasizes how organizations are inseparable from their wider socio-cultural context and how the collective beliefs existing in these contexts become part of the organizations. As the norms and values of the organization's operating environment are already more consistent with the organization itself, it makes it less effortful to achieve legitimacy. (Wæraas, 2020.) Second, *strategic perspective* highlights how legitimacy can be used to achieve the organization's strategic goals (Wæraas, 2020). Third, *discursive perspective* emphasizes the role of language and communication in building legitimacy. The discursive processes by which legitimacy is built are political and prone to persuasion. (Wæraas, 2020.) Noteworthy discursive legitimacy processes are likely to be discriminatory, as the public debate in which discursive legitimation is carried out rarely reaches all social groups and the discourses in general are spontaneous and difficult to predict (Steffek, 2009).

Regardless of what type or approach of legitimacy is examined, there is a consensus among researchers about the necessity of legitimacy for the vitality and prosperity of an organization. In order to succeed in the pursuit of legitimacy, public sector communication should at the same time strive to influence public perceptions through communication and respect stakeholders' perceptions of credible action, always taking into account the surrounding societal values and norms. (Wæraas, 2020.)

### 3.2.3 Trust

In a world full of unpredictability, Möllering (2001, 414) defines trust as a process in which "our interpretations are accepted and our awareness of the unknown, unknowable, and unresolved is suspended". Möllering's definition is based on a simple trust model whose components are expectation, interpretation and suspension. First, *expectation* means the end point of the trust process, which can be either favorable (trust) or unfavorable (distrust). Second, *interpretation* refers to how trust is based on people's experience of the world. Third, *suspension*, or facing the unknown, is the final stage of the trust process that represents the deepest nature of trust and enables the "leap of trust". This emphasizes how trust is predicated on surrendering to uncertainty. (Möllering, 2001.) In uncertain economic and political times, trust has become an ever more important element in public sector performance (Bouckaert, 2012). Trust is vital for public sector communication as it serves as the basis of the relationship between citizens and the public sector. Bureaucratic encounters between citizens and civil servants are

a key manifestation and interface of public sector communication, and in these meetings constant decisions are made on whether the other party can be trusted or not. (Raaphorst and Van de Walle, 2020.)

In the public sector, trust has many purposes, being "a cause, an objective, a driver and a leverage of public sector reform" (Bouckaert, 2012, 112).

Luoma-aho (2015) suggests that trust is a basis of the organization's character, on which all communication is built. Canel and Luoma-Aho (2018) define trust in the public sector as "the willingness, within the context of uncertainty, to grant discretion to the other party (an organization, a leader, a citizen, and so forth) in the use of public resources for the provision of public services, from which a certain compliance, or at least a reduction in the desire to control, emerges". Trust has also been perceived as the social capital of public organizations, which enables trust between citizens and trust between citizens and institutions to be built on the same basis (Llewellyn et al., 2013). On a more practical level, trust is seen as a requirement for citizens' successful adoption of public digital services (Distel et al., 2021). Furthermore, trust is suggested to be an important indicator to assess how high-quality citizens consider the administration and, on the other hand, how much citizens associate with governmental organizations (OECD, 2022).

At the same time, if trust is so fundamental to the operation of any organization or state, lack of it creates great disadvantages and threats, especially in terms of cooperation and economic matters (Riedl, 2004). The opposite of trust is often understood as distrust (McKnight & Chervany, 2000), and it has been argued that the global growth of distrust has been fierce, and that distrust has even become the default societal emotion (Edelman, 2022). Common explanations for the growing citizens' distrust in the public sector are related government performance and the growing expectations of citizens (Van de Walle et al., 2008). Similarly Lewicki et al. (1998) suggest that the difference between trust and distrust lies in expectations. While in the case of trust the expectation of another's conduct is *positive*, in the case of distrust the expectation is *negative*.

Trust and distrust are united by the fact that they can occur simultaneously (McKnight & Chervany, 2000), as well as the fact that both also have also unobvious functional roles in the public sector. The dysfunctional roles of trust can appear, for example, as abuse of vulnerability or blindness to failure, while on the other hand, the functional roles of distrust are related to protection from the abuse of vulnerabilities. (Oomsels et al., 2016.) The controversial nature of the concepts is also well illustrated by Bouckaert & van de Walle (2003), who note that trust itself is not a proof of good governance. In fact, totalitarian or repressive societies often have a high level of trust in the state. (Bouckaert & van de Walle, 2003.) Moreover, reporting on distrust can actually indicate higher levels of freedom of speech or a highly developed democratic system (OECD, 2022), which embodies how the interpretation of trust and distrust should be approached with criticism. Similar conceptual complexity also exists between the concepts of trust and control. Castelfranchi and Falcone (2000) argue that where there is no trust there is control and conversely where there is trust there is no

control. However, this is only a limited view of trust, and in fact control can also complement trust, for example by fostering the monitoring of trust-building processes to achieve global trust. Control also requires new forms of trust, such as trust in the control itself, the controller or the authority (Castelfranchi and Falcone, 2000).

Regardless of these conceptual multidimensionalities, it is clear that communicating trust is a central endeavor for both citizens and civil servants in the public sector (Raaphorst & Van de Walle, 2020). In times of uncertainty, trust is communicated through signals (Spence, 1973). Spence's theory on signaling suggests that in a market-driven, unpredictable society, it is inevitable that decision-making is most often based on insufficient information. Therefore in public sector encounters, both the organization and its stakeholders strive to communicate trust and common ground through various signal systems. This includes, among other things, symbols and official documents. (Raaphorst & Van de Walle, 2020). Rooted in the context of the labor market, Spence's signaling theory suggests that in the lack of sufficient information, the recruiting entity aims to find out about the desired characteristics of the job-seeking candidate with the help of certain signals. Vice versa, with the help of these signals, the job seekers try to narrow down the information gap and build trust between them and the desired employer. (Spence, 1973).

Adapting signaling theory to the public sector context and focusing in particular on bureaucratic encounters, Raaphorst and Van de Walle (2020) make a distinction between citizen signals and public sector signals, and highlight how different moderating contexts may influence the interpretation process of those signals. *Citizen signals*, first of all, mean communicating trustworthiness to public officials through, for example, appearance, behavior or expression. At the same time, through the signals they observe in encounters, public officials make assessments of citizens according to how trustworthy citizens are or how they could be categorized according to the ruling social system. *Public sector signals*, on the other hand, refer to numerous different actions and means by which the public sector tries to present itself as legitimate and trustworthy. These may include creating a glamorous annual publication, imitating the language of the private sector, using images of minorities in communications to present themselves as diverse (Bernardi et al., 2002), or projecting desired values through architecture (Goodsell, 2000) to mention a few examples. (Raaphorst and Van de Walle, 2020.) The interpretation of signals is dominated by the context in which they are sent and received. The *moderating context* can refer to numerous aspects, including organizational culture, the organization's reputation, cognitive bias such as prejudices related to social groups, or proximity, i.e. how close the receiver of the signal perceives the sender to be. Whether it is signals of citizens or the public sector, signal-sending is anything but a flawless process, as the ever-present possibility of misinterpretation can trigger unintended results between civil servants and citizens. In order to make the signaling of trust in the public sector as functional as possible, it is essential to take into account how public sector officials are trained in signal interpretation processes and, on the other

hand, how both officials and citizens are taught to signal trustworthiness in a functional way. (Raaphorst and Van de Walle, 2020.)

### 3.2.4 Transparency

In the time determined by global transformations and desires to build open governance Holzner and Holzner (2006) define transparency as “the social value of open, public and/or individual access to information held and disclosed by centers of authority”. Even more concisely expressed, transparency means open flow of information (Holzner & Holzner 2006). From an organizational perspective, an important part of transparency is that the organization's functions are both visible and understandable to those outside it (Bowen, 2010). Furthermore, from the point of view of public sector administration and democracy, transparency is considered to be an integral part of responsible governance (Erkkilä, 2012) and a prerequisite for a democratic public sphere (Nanz & Steffek, 2004). For public sector organizations whose mission is to serve citizens, transparency is an indispensable part of democracy, and especially international crises and information leaks of recent times have raised the importance of the concept even more (Tsetsura & Luoma-aho, 2020).

Scholars agree that transparency is inherently related to the concept of trust (Tsetsura & Luoma-aho, 2020; Norman et al., 2010; Porumbescu, 2017), even if there are differing views on the quality of the relationship. For example Rawlins (2008), focusing on measuring trust and transparency in employee-organization relations, suggests that organizations that encourage and enable public participation, surrender to public scrutiny and share relevant information about themselves and thus allow audiences to make informed decisions, probably also become more trusted. In the same way, a recent study focused on Scandinavian health authorities during the COVID-19 pandemic supported the view that transparency related to uncertainties had a positive effect on trust (Ihlen et al., 2022). On the other hand, Grimmelikhuijsen & Meijer (2014) propose, based on online experimental research, that transparency can only affect trust that is born from affection, rather than from prior knowledge. From this perspective, theoretical models of the relationship between transparency and perceived trustworthiness should include prior knowledge and a general tendency to trust (Grimmelikhuijsen & Meijer, 2014). Similarly, Schnackenberg and Tomlinson (2016) argue that transparency affects trust through the trustworthiness perceptions it creates in stakeholders. While trustworthiness is seen as a characteristic of the organization, transparency is actually understood as a characteristic of information (Schnackenberg & Tomlinson, 2016).

Where there is no transparency, nontransparency occurs (Tsetsura & Luoma-aho, 2020). Tsetsura & Luoma-aho (2020) present four manifestations of nontransparency from the perspective of the public sector: corruption, bribery, propaganda and secrecy. *Corruption* is “behavior which deviates from the formal duties of a public role because of private-regarding (close family, personal, private clique) pecuniary or status gains; or violates rules against the exercise of

certain types of private-regarding influence" (Nye, 1967, 417). Warren, on the other hand, defines (2004, 329) corruption in democracy as "duplicitous and harmful exclusion of those who have a claim to inclusion in collective decisions". One form of corruption is *bribery*, which is an activity in which money, services, or other goods are given in exchange for the favors of those in power. Reducing bribery is particularly challenging in countries where giving and receiving bribes is a cultural norm despite anti-bribery or anti-corruption laws. (Tsetsura & Luoma-aho, 2020.) *Propaganda* is defined as "deliberate, systematic attempt to shape perceptions, manipulate cognitions, and direct behavior to achieve a response that furthers the desired intent of the propagandist" (Jowett & O'Donnell, 1999, 6). In other words, propaganda is characterized by an effort to influence people's behavior in a desired way (Tsetsura & Luoma-aho, 2020). Corruption and propaganda have often been considered the opposite of transparency. (Tsetsura & Luoma-aho, 2020). The opposite of transparency is also defined as *secrecy*. (Rawlins, 2008.) Costas & Grey (2014, 1423) define organizational secrecy as the "the ongoing formal and informal social processes of intentional concealment of information from actors by actors in organizations". Secrecy can be both informal and formal, and the relationship between the two is complex and fluid (Costas & Grey, 2014).

Efforts to combat nontransparency necessitate extensive actions on a global scale. According to the Corruption Perception Index of 2022, transparency has not shown significant improvement worldwide. While progress has been observed in some countries, 155 nations have either not made progress in fighting corruption or have experienced a decline since 2012 (Transparency International, 2023). In order to fight corruption, many governments have tried to increase transparency with new digital tools, for example by publishing information about internal operations and building digital inquiry lines for authorities (Matheus et al., 2021). Matheus and Janssen (2020) describe the implementation of governmental transparency through a window theory, where a window, or rather several, is needed to design in order for the public to view the government's internal operations. More precisely, particular windows are needed "to view government functioning, aimed at overcoming the information asymmetry between the government and the public" (Matheus & Janssen, 2020, 3). To enable the creation of such windows and thus promote digital transparency in government, Matheus et al. (2021) have identified key design principles of which the most important and influential include privacy, openness, stewardship, data quality rating, transparency-by-design, opening of raw data, standardized formats, data access, gradation of details, and finally comprehension. However, above all, the most fundamental task of modern societies to achieve the missing transparency would be to increase trust, as transparency improvement processes are only effective if they are trusted by citizens (Tsetsura & Luoma-aho, 2020).

### 3.2.5 Politics & policy

Politics has been conceptualized in several ways throughout history, such as governmental activity, public affairs, conflict resolution, and the study of power (Heywood, 2019). Here politics is approached as a political-economic process comprising “all the activities of co-operation, conflict and negotiation involved in decisions about the use, production and distribution of resources” (Leftwich, 2007, 13). Formal decision-making may be identified as the most important manifestation of politics, yet politics are present more widely in any human group or organized activity. Hence, politics is a necessary and universal, collective human activity that is not dependent on formal institutions or governance. (Leftwich, 2007.)

Human relations cannot exist without communication (Luhmann, 1990), and therefore there is no politics without communication either. While this premise is evident, the position of public sector communication in relation to politics is more complex and multifaceted, as the purpose of public sector communication is to serve multiple interests by both citizens and representatives chosen by the citizens. Although the context of public sector communication is admittedly strongly political, in Western democracies separation from political influence has been an essential endeavor of public sector communication. (Glenny, 2020.) Political communication is typically defined as “any interaction regarding political figures or political issues on a communication platform where it can be shared with different audiences” (Elishar-Malka et al., 2020). In this definition, however, the role of the public sector remains vague. In order to make a clear distinction between political and apolitical communication, Glenny (2020) presents a set of features of public sector communication in the context of Australia, Canada and the UK. To begin with, *political communication* is undertaken by politicians, political party operatives, political and media advisers and lobbyists, while *apolitical communication* is carried out by public sector communicators and civil servants. Second, the goal of political communication is a political decision, when apolitical communication aims at administrative or governmental decisions. Third, in political communication the messages are partisan, persuasive, selective and electioneering when in apolitical communication rather nonpartisan, factual, transparent and persuasive from the perspective of policy implementation. (Glenny, 2020.) Although the distinction of political-apolitical communication presented above answers the questions of who, what and how, it is also necessary to consider *where* communication takes place. Eder (2006) continues the analysis of the discursive nature of the Habermasian concept *public sphere* by making a distinction between the public sphere of political communication and the public sphere of non-political communication. What separates the public sphere of political communication from the rest is that it includes a code that guarantees equal access to anyone interested in forming political will or opinion. (Eder, 2006.) Thus, the idea of the public sphere of political communication adapts to the idea of deliberation,



whereby citizens should have access to public decision-making at all its stages (Chambers, 2003).

Close to politics is the concept of policy, which in short, is understood as “the broad strategic direction of government” (Page & Jenkins, 2005, 2). Gerston (2010, 7) defines public policy as “the combination of basic decisions, commitments and actions made by those who hold or influence government positions of authority”. In this definition, the dynamic, two-way interaction between citizens and the government in policy making processes becomes visible.

Policy making is a process shrouded in uncertainty and always permeated by different values and interests. Therefore, setting rational policy goals can be considered an impossible task. (Heazle, 2012.) Despite this complexity and inherent uncertainty, the process of policy making can be more clearly understood by outlining the general steps involved. Drawing on the ideas of Lasswell (1956), Knill and Tosun (2020, 8-9) present a simplified, four-phase policy process model named as the policy cycle, in which phases are as follows: 1) defining the problem and agenda setting, 2) policy formulation and adoption, 3) implementation and 4) evaluation of the policy process (Knill and Tosun, 2020.) The precisely defined stages of the framework offer the opportunity to compare the successes and failures of policies in question, besides which they can be utilized to examine the democratic quality of policy processes (Jann and Wegrich, 2017). However, Knill and Tosun (2020) as well as Jann and Wegrich (2017) criticize the policy cycle model for the fact that a generic model is often weakly consistent with the complex empirical reality, with phases often overlapping and some phases being completely left out of the process at times. Hence, the policy cycle is above all a heuristic tool that can be used to segment and organize the complexity of policy making (Capano & Pritoni, 2020). From a more citizen-centric perspective, Hajer and Wagenaar (2003) in turn suggest that policy making could function as an interactive public stage where deliberation takes place. Furthermore, Fischer (2003) points out that citizens' participation is not only a prerequisite for a democratic policy-making process, but citizens' involvement in the process also increases the legitimacy of policy development and improves policy implementation. Considering this, the utilization of policy making as a deliberative public space is many ways beneficial for both citizens and authorities.

What is undeniable is that public sector communication is facing new opportunities and challenges when positioning itself in relation to politics and policy due to the rapid changes of the digital landscape. The development of new digital technologies shapes both the political and policy processes (Gilardi, 2022) as platforms such as social media or blogs offer new opportunities for public participation in political debate (McNair, 2017). Simultaneously, digital solutions are revolutionizing the development of policy making processes (Gilardi, 2022). Advanced information technologies like analytics, gamification and simulation enable new, unconventional interaction between policy-makers and citizens. This transforms not only the role of policy-makers and power relations between

policy-makers and citizens, but also the pace of deliberation. (Janssen & Helbig, 2016.) However, the impact of these changes on politics, policy making and democracy should not be glorified. Even if technologies offer an apparent opportunity for everyone to participate in political debate and policy making, in reality discussion, engagement and contribution are not accessible to everyone. Chambers (2023) argues that in the era of digitalization, the most serious threats to democracy are asymmetric fragmentation and privatization of the public sphere. On top of this, Chambers (2023) questions whether these developments are due to digitalization or whether it would be more important to focus on the political actors and power structures that enable the ongoing fragmentation and privatization of the digital public sphere.

### 3.2.6 Summary

The concepts of democracy, organizational legitimacy, trust, transparency, politics, and policy are used in this study to address public sector communication at the societal level. Table 2 compiles the key components of the concepts covered in this study.

First, democracy is here examined from a deliberative perspective, where the focus is on the discursiveness of democratic processes and the collective formation of public opinion that takes place in the public sphere (Carpini, 2020; Mansbridge, 2015; Gutmann & Thompson, 2004; Chambers, 2003; Habermas, 1989). The ideal of deliberative democracy includes the assumption that better governance and decision-making are created through dialogue and inclusion (Gastil, 2007) and the goal of communication is therefore to engage and involve citizens in the discussion, whether it is informal meetings or a global public debate (Chambers, 2003; Gastil, 2007).

Second, organizational legitimacy is described as a socially created perception, the prerequisite for which is congruence between the organization's measures and the beliefs of stakeholders. (Deephouse et al., 2018; Suchman, 1995, Dowling & Pfeffer, 1975). Legitimacy is a necessity so that the organization can get the support of stakeholders and the continuity of its activities can thus be secured (Ashforth & Gibbs, 1990; Suchman 1995; Meyer & Rowan, 1977). Through communication, legitimacy can be strengthened by influencing public perceptions of the organization while respecting stakeholders' perceptions of credible action (Wæraas, 2020).

Third, trust is conceptualized as a process in which the acceptance of uncertainty is essential (Möllering, 2001). Building trust is essential for public organizations, as it is the foundation of the organization's character, on which all communication is built (Luoma-aho, 2015). In the public sector, trust is communicated using citizen signals and public sector signals, considering that the context always influences the interpretation of these signals (Raaphorst and Van de Walle, 2020; Spence, 1973).

Fourth, transparency is described as open and free access to information managed on behalf of the authorities (Holzner & Holzner, 2006). Transparency is

seen as an inseparable part of responsible governance (Erkkilä, 2012) and at the same time as a precondition for a democratic public sphere (Nanz & Steffek, 2004). Although design is of great importance in developing transparency (Matheus et al., 2021; Matheus and Janssen, 2020), the most essential thing in developing transparency is increasing trust, as transparency improvements are only effective if they are trusted by citizens (Tsetsura & Luoma-aho, 2020).

Finally fifth, politics is understood as a political-economic process aimed at the use, production and distribution of resources, which manifests itself in both formal and informal contexts in all groups of people and organized activities (Leftwich, 2007), while policy is described as a collection of decisions and measures that are influenced by both authorities and citizens (Gerston, 2015). From the perspective of deliberation, public sector communication should strive to operate in the sphere of political public communication, the ideal of which is equal access for all citizens to form a political opinion (Eder, 2006). At the same time, public sector communication should utilize policy making as an interactive public stage of deliberation (Hajer and Wagenaar, 2003).

TABLE 2. Public sector communication characteristics at the societal level.

Concept	Definition	Impact on the Public Sector	Goal of Communication	Counteractive Effect	Sources
<i>Democracy</i>	Deliberative democracy is “a form of government in which free and equal citizens (and their representatives), justify decisions in a process in which they give one another reasons that are mutually acceptable and generally accessible, with the aim of reaching conclusions that are binding in the present on all citizens but open to challenge in the future.” (Gutmann & Thompson, 2004.)	Creates higher quality governance and decision-making	To engage citizens on discussion and dialogue	Tyranny, Authoritarianism, Democracy Gap	Chambers, 2003; Freedom House, 2023; Glasius, 2018; Gutmann & Thompson, 2004; Habermas, 1969; Hoekstra, 2016
<i>Organizational Legitimacy</i>	Organizational legitimacy is “the perceived appropriateness of an organization to a social system in terms of rules, values, norms, and definitions” (Deephouse et al., 2018.)	Gains stakeholder support, creates continuity and secures survival of an organization	To influence public perceptions and respect stakeholders' perceptions of credible action	Legitimacy Gap, Illegitimacy	Pfeffer and Salancik, 1978; Sethi 1975; Suchman, 1995; Wæraas 2020

<i>Trust</i>	Trust is “a process in which our interpretations are accepted and our awareness of the unknown, unknowable, and unresolved is suspended”. (Möllering, 2001.)	Allows giving other parties the authority to discretion in the distribution of resources, resulting in a decrease in the desire to exercise control	To signal trustworthiness between citizens and civil servants	Distrust	Canel and Luoma-Aho, 2018; Edelman, 2022; McKnight & Chervany, 2000; Möllering, 2001; Raaphorst and Van de Walle, 2020; Spence, 1973
<i>Transparency</i>	Transparency is “the social value of open, public and/or individual access to information held and disclosed by centers of authority”. (Holzner & Holzner, 2006.)	Exists as an integral part of responsible governance and a prerequisite for a democratic public sphere	To increase trust to make transparency development processes effective	Nontransparency, Corruption, Bribery, Propaganda, Secrecy	Costas & Grey, 2014; Erkkilä, 2012; Holzner & Holzner, 2006; Ihlen et al., 2022; Jowett & O'Donnell, 1999; Matheus & Janssen, 2020; Nye, 1967; Tsetsura & Luoma-aho, 2020; Rawlins, 2008; Warren, 2004
<i>Politics &amp; Policy</i>	Politics is “all the activities of co-operation, conflict and negotiation involved in decisions about the use, production and distribution of resources.” (Leftwich, 2007, 13.)  Policy is “the combination of basic decisions, commitments and actions made by those who hold or influence government positions of authority” (Gerston, 2015, 7.)	Allows citizens and authorities to make decisions on shared resources	To enable citizen participation in political debate and policy making	Fragmentation, privatization	Chambers, 2023; Gerston, 2015; Janssen & Helbig, 2016; Leftwich, 2007

## **4 METHODOLOGY AND RESEARCH PROCESS**

This chapter provides an overview of the methodological approach adopted in the study, which encompasses its philosophical underpinnings, data collection and research process. Finally, research ethics are discussed.

### **4.1 Methodological choices**

The research onion constructed by Saunders et al. (2019) in Figure 5 summarizes the key methodological choices made in this study. The onion's outermost layers present the research's philosophical underpinnings and approach to theory creation. This research follows an interpretivist philosophical paradigm, which presumes that reality is socially constructed and context-specific (Guba & Lincoln, 2017). Moreover, in line with the interpretivist paradigm, this study considers the influence of context in data interpretation. (Carson et al., 2001.) This research study adopts a hybrid approach to theory development, incorporating deductive and inductive reasoning in the research process (Proudfoot, 2022).

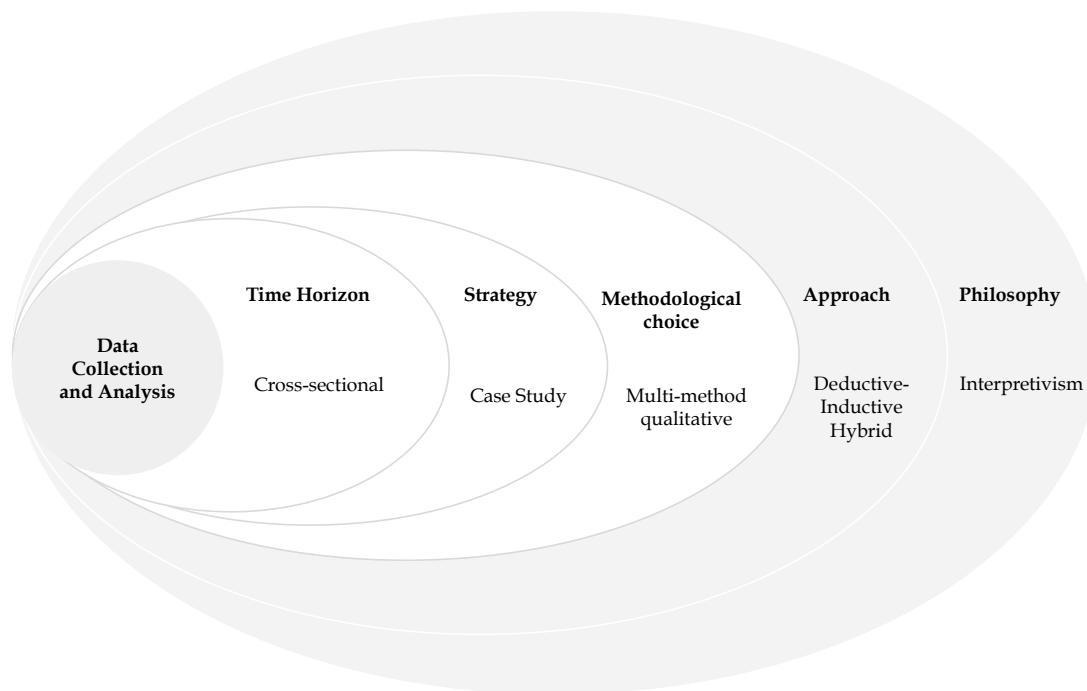


FIGURE 5. Research onion. Adapted from Saunders et al. (2019).

The methodological decisions of this study are illustrated in the inner layers of the research onion, which include the research strategy and time horizon. By employing both inductive and deductive analysis, this study adopts a multimethod qualitative research approach (Mik-Meyer, 2020). The research strategy employed in this study is a case study, which involves an intensive analysis of a single, limited unit to derive generalizations from it (Gerring, 2004). The study has a cross-sectional time horizon, allowing the researchers to analyze data collected during a specific period (Wang & Cheng, 2020). Lastly, at the core of the onion is data collection and analysis. In this study, the primary data, i.e., original data collection (Hox & Boeije, 2005), was utilized and specifically, an existing data set that was deemed relevant to address the research questions was chosen for analysis. In the subsequent paragraphs, the methodology, data collection, and research process of this study are elaborated further.

## 4.2 The choice of interpretivist qualitative research tradition

Qualitative research has a long-standing tradition in anthropology and sociology and has become a widely used methodology in the social sciences. It allows researchers to study human experiences in their natural and specific contexts (Merriam & Grenier, 2019). Van Maanen (1979) describes qualitative research as a collection of interpretive techniques that aim to understand and make sense of the meaning, rather than the frequency, of naturally occurring phenomena in the

social world. The goal of qualitative research is to explore subjective meanings and contribute to theoretical frameworks (Saunders et al., 2019). To ensure the quality of qualitative research, it is crucial to accurately capture and convey the subjective meanings, actions, and social context of research participants (Fossey et al., 2002).

In qualitative research, various paradigms exist, including positivist, postpositivist, critical, and interpretive approaches (Guba & Lincoln, 2017). For this study, the interpretive paradigm was chosen. These paradigms differ in their perspectives on the nature of reality and their fundamental beliefs about knowledge (Carson et al., 2001).

*Ontology* refers to the underlying assumptions about the nature of reality. A positivist ontology assumes the existence of a single external world, suggesting that researchers have direct access to an objective reality (Carson et al., 2001). In contrast, the postpositivist approach acknowledges the existence of reality but recognizes its imperfect and probabilistic nature (Guba & Lincoln, 2017). Critical theory approaches reality by considering how it is shaped through social, political, cultural, and economic values over time (Guba & Lincoln, 2017). The interpretive approach, employed in this study, posits that there is no singular external reality, and researchers do not have direct access to it. Instead, reality is viewed as socially constructed, local, and specific (Carson et al., 2001).

*Epistemology*, on the other hand, relates to assumptions about knowledge production, including what makes knowledge acceptable and how it is communicated (Burrell & Morgan, 2017). From a positivist epistemological standpoint, it is believed that reliable and objective information can be obtained (Carson et al., 2001). The postpositivist approach recognizes that knowledge is based on human assumptions, and while absolute truth may be unattainable, the discovery of instances that falsify assumptions is desirable (Lindlof & Taylor, 2011). The critical approach views knowledge as transactional and acknowledges the subjectivity of findings (Guba & Lincoln, 2017). In the interpretive approach, which is the chosen paradigm in this study, information is perceived and understood within its specific context (Carson et al., 2001).

Qualitative research paradigms also differ in their assumptions about values and ethics. *Axiology* pertains to the researcher's values and the extent to which they influence the research process and outcomes. In interpretivist research, there is an axiological assumption that research is a value-bound, reflexive, and subjective process. Researchers are not only participants in the research, but their interpretations also contribute to the knowledge produced. This contrasts with positivist research, which assumes freedom from values and a separation of the researcher from the research object. (Saunders et al., 2019.)

Furthermore, choosing the appropriate methodological approach and research design is crucial for conducting a successful qualitative study. Interpretivist studies tend to be inductive, focusing on small samples and in-depth exploration, while positivist research emphasizes deductive methods and larger sample sizes (Saunders et al., 2019). However, interpretivists recognize that both objective and subjective approaches are acceptable, with the

understanding that no research can be entirely objective (Willis, 2007). Qualitative research encompasses various designs, including narrative research, phenomenology, ethnography, grounded theory, and case studies (Creswell, 2014). Recent developments have introduced new designs such as mixed methods, qualitative action research, and arts-based research (Merriam & Grenier, 2019). While these designs share qualitative elements, they differ in terms of formulating research questions, collecting and analyzing data, and reporting findings (Merriam & Grenier, 2019). For this study, a case study design has been selected, and its advantages and disadvantages will be discussed in the following section.

### 4.3 Using a case study as a method

The choice of *case study* as a method allows the researcher to explore the data in its specific context (Zainal, 2007). Case study is used when intensively studying a single, limited unit with the aim of making generalizations of it to a larger set of units (Gerring, 2004). Yin (2009, 18) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. The researched phenomenon is therefore not separated from its context, but the purpose is to find out how the phenomenon affects its context and vice versa (O’Gorman & MacIntosh, 2015).

Case studies offer numerous advantages in research and theory development. They allow for the examination of complex phenomena from multiple perspectives, including contextual information (Lauckner et al., 2015). Case studies are especially valuable for theory development and testing, as they provide insights into the "why," "how," and "what" questions (O’Gorman & MacIntosh, 2015). Key strengths of case studies in theory development include high conceptual validity, the formulation of new hypotheses, the investigation of causal relationships within individual cases, and the ability to tackle complex causal factors (George & Bennett, 2005).

However, Yin (1984) highlights three typical disadvantages that researchers should consider when conducting a case study. First, case studies may lack rigor when based on vague evidence or biased perspectives. Second, the limited number of subjects raises questions about the generalizability of findings. Third, case studies often require extensive time, effort, and documentation, making systematic management challenging (Yin, 1984). Furthermore, limitations of case studies in theory development include difficulties in measuring the average causal effect of variables in the sample and potential shortcomings in case independence and clarity (George & Bennett, 2005).



### 4.3.1 Introduction to the case

The transition towards intangible, digital identity is rapidly advancing in Finland and globally. In October 2020, the Ministry of Finance initiated a project aimed at developing digital identity and its application methods. According to the ministry, digital identity encompasses “all of the information relating to one’s self in a digital format”, with the goal of facilitating its electronic utilization and management (Ministry of Finance, 2023). This Finnish digital identity renewal aligns with the broader transnational initiative led by the European Commission. In 2021, the European Commission proposed the establishment of a European identity wallet, intended to facilitate the exchange of information across national borders. (European Commission, 2023). Consequently, the Finnish Digital Identity Development Project aims to develop solutions that are compatible with the European identity wallet (Digital and Population Data Services Agency, 2022). Both the Finnish and European digital identity initiatives emphasize granting users full control over their personal data and enabling selective sharing with third parties (European Commission, 2023).

Finland actively participates in the international Digital Identity Working Group (DIWG), alongside Australia, Canada, Israel, New Zealand, Singapore, the Netherlands, the United Kingdom, and with the World Bank as an observer. Established in 2020, the DIWG focuses on exploring solutions for governments and individuals to recover from the impacts of the COVID-19 pandemic (DGX Digital Identity Working Group, 2022).

In September 2022, the government of Prime Minister Sanna Marin presented a legislative proposal to regulate the digital identity services provided by the Digital and Population Data Services Agency, as well as a law concerning digital identity certificates. Concurrently, proposed changes were made to laws pertaining to electronic identification, the population data system, the certificate service of the Digital and Population Data Services Agency, the processing of personal data in police operations, as well as the laws related to ID cards and passports. The objective of these proposed amendments is, for example, to enable the implementation of a new mobile application that both the Finnish Police and the Digital and Population Data Services Agency can use to provide supported identification services (HE 133/2022). In February 2022, the Ministry of Finance requested statements from citizens and organizations through an online service regarding the digital identity legislation draft. This case study focuses on the Ministry of Finance's request for statements related to the government's proposed digital identity legislation (VN/18505/2021).

## 4.4 The selection of the data

This research examines the phenomenon of misinformation in public organizations through the legislation of digital identity in Finland. As a part of the legislative process, the Ministry of Finance made a request for comments

regarding the project available for all citizens, associations, and corporations to take part in. The request was successful, as it received 633 statements. Among the statements, there were multiple statements containing and spreading misinformation. When considering the suitable data for the research, the statements collected for the project felt proper as they enabled the observation of the phenomenon but still added additional value to the case study. The request for an opinion was open on the Ministry of Justice's website, *lausuntopalvelu.fi*, from 21.2.2022 to 8.4.2022. 633 statements were gathered during this time period.

*Lausuntopalvelu.fi* is a website administered by the Ministry of Justice that presents an opportunity for all public authorities to request an opinion on a matter and for all organizations, associations, and citizens to give their opinion on an issue (Ministry of Justice, 2022). The aim of the service is to ease opinion proceedings, increase civic participation, increase the accessibility of information, and increase the quality and transparency of the process (Lausuntopalvelu.fi, 2023). Users need to authenticate themselves in order to use the service, and all given statements are public, which decreases the possibility of intentional, systematic trolling.

Typically, when people are content with something, they do not find it necessary to take a stand on it. This can be explained by the phenomenon of negativity bias. Negativity bias suggests that people are generally more likely to take notice of negative events and focus more on the negative than the positive (Rozin & Royzman, 2001). This explains why, generally, the statements written by citizens on *Lausuntopalvelu.fi* are negative. People who are satisfied with the content of the request have nothing to add to the proposition and thus rarely make a statement. However, people who are worried about or oppose the legislation express their dissatisfaction by writing an opposing statement.

The service provides an opportunity for all citizens to take a stance on relevant and current issues in society. The statements' length and contents vary depending on the readiness and competence of the writer. The statements relevant for this study contained one-word statements, medium-length statements, and longer (over 2000 words) written positions. Examples of short and medium-length statements are provided below:

I oppose all forms of the digital identity legislation.

The government's proposal regarding digital identity is unconstitutional, against the original objectives of the EU, and against all human rights to the greatest extent. It puts people in unequal positions in multiple ways and obstructs the citizens' freedom to go wherever they want, which is a basic right. The information regarding one's medical conditions is classified, and this proposition insists that it become public information. It also interferes with the civil liberties and personal integrity of citizens and restricts the right to choose what you want to do with issues regarding your health. This legislation enables the dictatorship of government officials and political players and is extremely vulnerable to misconduct and data security risks. Under the cover of preventing the COVID-19 pandemic, supervision systems have been built that lead to the loss of individuality and personal liberty and threaten to make Finland a totalitarian country. The implementation of digital ID promotes this damaging direction. The proposition has not taken account of or acknowledged the countless harmful side effects of vaccinations,

or the deaths and disabilities caused by them. In addition to this, the effects of digitalization in terms of radiation, which affects people's health, relationships, and concentration, causes kids' nausea and affects their performance at school, reduces the offering of local services, requires compulsory use of time for reporting, and the list goes on, have not been taken into consideration. Above all, this will lead to the loss of freedom. In addition to all this, the development of digital ID has happened in secret from citizens and with indecipherable concepts that hinder the understanding of the legislation for most citizens. For a long time people were labeled "conspiracy theorists" if they talked about this. I absolutely oppose this legislation. It will lead to a terrifyingly controlled society, and it should be shut down immediately.

All statements, apart from two statements written in Swedish, were written in Finnish. For the purpose of this thesis, the passages from the statements introduced in the text have been translated into English by the researchers.

#### 4.4.1 Preparing and processing the data

The data was gathered from the Ministry of Finance's request for an opinion regarding the implementation of digital identity. The request reached several people, as the total number of given statements was 633. Due to the nature of the study, the statements made on behalf of a company or an association (109 in total) were excluded from the analysis, and the study focused on the statements made by individual citizens. The statements written on behalf of a company included the company name in the statement and thus were easily identified and excluded from the data. In addition to this, the statements often mentioned the company or the legislation's impacts on the company's functions. On this account, the relevant statements were easily identified from the data. Moreover, blank statements (33 in total) made by citizens were excluded from the data. From the 633 opinions given, 491 were found relevant for this study. After differentiating the substantial data from the original data set, the newly limited data was processed and imported to Atlas.ti.

The data required some processing to be qualified for the analysis process in Atlas.ti. First, the data was downloaded in Excel form from the Ministry of Finance's website, *lausuntopalvelu.fi*. Then the previously mentioned exclusions were established for the data to be relevant for the study. After this, the data was imported to Atlas.ti by the "master" coder. The master coder then made the necessary implementations in Atlas.ti and duplicated the project for the additional coder.

#### 4.5 Hybrid thematic analysis as a method

*Thematic analysis* is a well-established method of qualitative data analysis that enables making sense of the meanings (themes) of the data set in a systematic and organized manner (Braun & Clarke, 2012). Thematic analysis can be the researcher's choice in any field of social sciences if "general qualitative research questions about experience, understanding, social processes, and human

practices and behavior make sense" (Terry et al., 2017, 34). The method is considered as simple and understandable, which makes it more accessible (Javadi & Zarea, 2016). One of its primary strengths is flexibility, such as independence from ontological frameworks, versatile possibilities in data collection methods and sample sizes, as well as various data coding methods (Terry et al., 2017). The methodological limitation and pitfall of thematic analysis, on the other hand, may be the lack of analyticity in data processing, in which case the analytical work of "making sense" is unfulfilled. In a weak thematic analysis, there may also occur overlaps or inconsistency within the themes, or the themes and the analysis may be mismatched. (Braun & Clarke, 2006.)

Traditionally thematic analysis can be carried out either deductively with a top-down method (theory-driven) or inductively with a bottom-up method (data-driven) (Braun & Clarke, 2012; Boyatzis, 1998). However, scholars have recognized the value of shifting between deductive and inductive approaches when studying multidimensional and complex phenomena. Thus, through a hybrid analysis model, there is potential to demonstrate rigor and most importantly, complement methodological shortcomings of each. (Proudfoot, 2022; Hatta et al., 2020; Fereday & Muir-Cochrane, 2006.) In order to answer both RQ1 and RQ2, this study utilized hybrid thematic analysis, integrating inductive and deductive analysis. In this study, *hybrid thematic analysis* is understood as a method combining predefined, deductive, themes and data-driven, inductive, themes in the analysis. It is crucial that in a hybrid thematic analysis synthesis is sought, and therefore the aim is to combine or hybridize themes at the end of the analysis (Proudfoot, 2022).

Figure 6 attempts to illustrate the research process of hybrid thematic analysis, where the two-part codebook is formed both inductively and deductively. The first part of the codebook (RQ1) is based on the theoretical background of misinformation, while the second part of the codebook (RQ2) is created inductively based on the researchers' observations of the data. The codebook, which includes all the codes utilized in this study and accompanying quotations, is available in Appendix 5.

	Theoretical background	Data	Methodology	Codebook
RQ1	Misinformation	Digital identity legislation statements	Inductive/Deductive Hybrid Thematic Analysis	A priori codebook
RQ2	Public sector communication			Inductive analysis (data-driven)

FIGURE 6. Process of hybrid thematic analysis.

In this study, the unit of analysis was an individual citizen statement, irrespective of its length, ranging from a few words to several thousand words. Two independent coders conducted the coding process using both inductive and deductive approaches simultaneously. It is crucial to acknowledge that in the coding process for misinformation types (deductive analysis), **each statement was assigned to only one category of misinformation**. Conversely, when coding the topics covered in the statements (inductive analysis), **each statement could be assigned to multiple codes**. The subsequent subchapters provide a detailed description of the deductive and inductive processes, as well as the conduction of the hybrid thematic analysis.

#### 4.5.1 Deductive analysis

Through deductive analysis, this study aims to answer the following research question:

**RQ1:** Does misinformation occur in citizens' statements on digital identity legislation?

*Deductive thematic analysis* uses theoretical propositions as its starting point and utilizes them in the analysis process of the data (Pearse, 2019). In this research, this means that the coding of the data was done deductively and the codes were predetermined by using prior literature and theories. Deductive coding is also often referred to as theory-driven coding (Boyatzis, 1998). Fereday and Muir-Cochrane (2006) have illustrated the steps of thematic deductive analysis as follows: (1) Developing the code manual, (2) Testing the reliability of the code, (3) Summarizing data and identifying initial themes, (4) Applying templates of codes and additional coding, (5) Connecting the codes and identifying themes, and (6) Corroborating and legitimating coded themes. The process of deductive coding begins with the development of the code manual. The code manual is formed based on the research question by utilizing prior literature or concepts (Fereday & Muir-Cochrane, 2006). This also includes the labeling, defining, and describing of the chosen codes (Pearse, 2019). In this research, the codes were predetermined through literature and tied to concepts found in them to adequately answer the research question. Six broad code categories were established for the analysis. The second step presented by Fereday and Muir-Cochrane (2006) is testing the reliability of the codes. Testing the reliability of the codes ensures their applicability to raw information (Boyatzis, 1998). In this research, the reliability and consistency of the codes were tested by independent coding. The first 50 documents were independently coded by two coders. After this, the results were compared, and the descriptions of the codes were adjusted to be more unambiguous. The coding process of this research was aligned with the steps presented by Fereday and Muir-Cochrane (2006). Each of the 491 statements was systematically coded into one previously determined code category. As the code categories were broad, all 491 statements were successfully coded into the predetermined code categories, and no additional coding was required.

When conducting a deductive thematic analysis, it is necessary to form a conceptual framework to clarify the findings of the study (Pearse, 2019). A conceptual framework focuses the aim of the study on the key factors, variables, or constructs and assists researchers in the analysis process (Miles, Huberman, & Saldana, 2014). The conceptual framework of this study was formed around misinformation types found in the literature. Firstly, the found misinformation types were divided into three upper categories by the nature of the misinformation utilizing the literature by Osman et al., 2020 (*no factual basis, uncertain factual basis, and exaggerated factual information*). After this, the additional literature narrowed the misinformation types into six broad code categories that then formed the code manual. (*inaccurate beliefs, misremembering, truth judgment, premature conclusions, misleading content, and contextualization*). All 491 statements were coded according to this framework into a one code group. The accurate descriptions simplified the coding process and ensured equivalent coding.

Code & Definition	Quotation	Description
<p><b>Truth judgment</b></p> <p>Conceptions about the truthfulness of a statement. In order to truly internalize new information, individuals need to make coherent associations between prior knowledge and the information they encounter. (Chaxel, 2022).</p>	<p><i>“Different parties are constantly warning us about cyber attacks. <u>The data leakage that happened with Vastaamo is still in fresh memory.</u> In addition to these security issues and the adequacy of electricity, a system like this increases the possibility to misuse power. <u>Countries considered to be “democratic” such as Canada, have frozen people’s bank accounts for expressing their opinions.</u>”</i></p>	<p>The central argument is that prior knowledge affects the process of receiving additional/new information.</p>

FIGURE 7. An example of the deductive coding process of the statements.

Deductive analysis has many benefits that make it the right approach when answering the first research question of this study. As deductive analysis utilizes prior theory, the theories of the phenomenon can be supported and extended (Hsieh & Shannon, 2005). Misinformation is a widespread issue in our society (Lewandowsky et al., 2012), and its causes are very complex and hard to identify. Deductive analysis categorizes the types of misinformation based on the theory and thus combines the prior knowledge to support the phenomenon (Pearse, 2019). Deductive analysis has been found to be beneficial in case studies, and some researchers, such as Riege (2003) and Yin (2009), are proponents of the matter. Therefore, deductive analysis was found to be the best method to examine the types of misinformation that arise from the data.

Nonetheless, there are some limitations to the use of deductive thematic analysis. When basing the code manual on prior literature, the possibility of building a strong bias increase (Hsieh & Shannon, 2005). This means that

researchers might be more inclined to support the existing theory rather than discover findings that are unsupportive of the theory (Hsieh & Shannon, 2005). Additionally, the analyzing process relies on the interpretation of statements, which complicates the analysis when having multiple coders.

To accurately categorize the statements, verifying the content of the statements was essential. When conducting the analysis, it was necessary to determine which statements included misinformation or were presented in a way that made them misleading. This was done by utilizing external sources, e.g., search engines and policy briefs, and internal sources, e.g., general knowledge. The possible sources used in the statement were verified, and the alignment between the statement and the source was reviewed. In addition to this, the way the opinion was expressed had an impact on the truthfulness of the statement. When opinions or predictions were presented as facts, the message of the statement was distorted, and the statement was labeled as containing misinformation. Figure 8 below aims to illustrate the process of identifying misinformation in the statements.

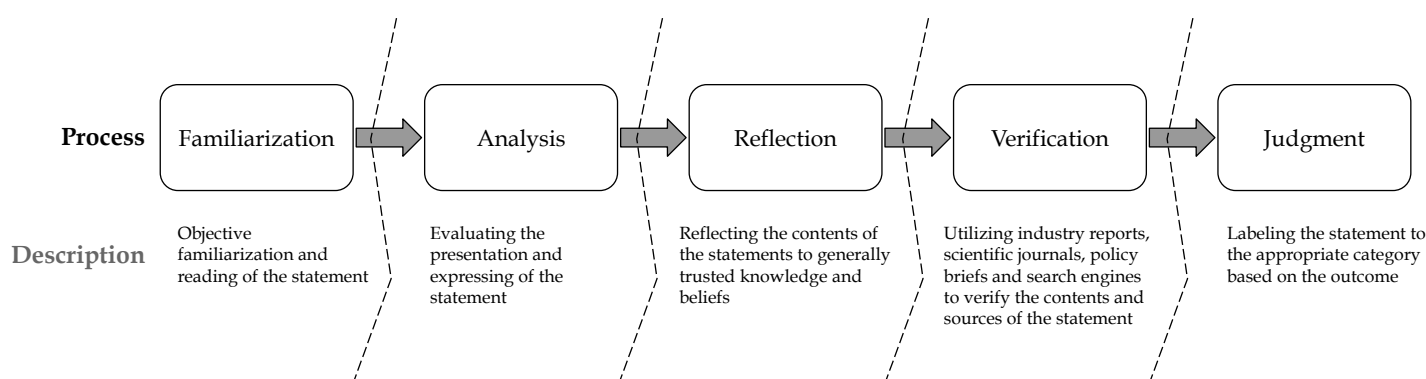


FIGURE 8. The process of verifying the content of statements.

#### 4.5.2 Inductive analysis

Through inductive analysis, this study aims to answer the following research question:

**RQ2:** What kind of topics did citizens link to their statements on the digital identity legislation?

*Inductive thematic analysis* refers to data-driven analysis where data is coded without trying to fit it into an existing theoretical framework (Braun & Clarke, 2006). In inductive analysis, patterns, themes and categories are identified from the data (Patton, 1990). In this study, inductive thematic analysis was carried out with using Braun and Clarke's (2006) six-phase thematic analysis process through following stages: (1) Familiarization with the data, (2) Generating initial codes, (3) Searching for themes, (4) Reviewing themes, (5) Defining and naming themes and (6) Producing the report. The initial phase of the inductive research process involved familiarizing the researchers with the data set. In this study,

both coders independently reviewed the entire data set consisting of 491 documents, noting down their initial thoughts and ideas. Moving to the second phase, the generation of initial codes required a series of steps. Initially, collaborative efforts were made to create the preliminary codes. Subsequently, the first 50 documents were coded independently by both coders to test the validity of the preliminary codes. Duplicate codes were eliminated, and codes were combined or added as needed. The first 50 documents were then re-coded independently, followed by an inter-coder agreement (ICA) analysis (chapter 4.5.3 provides a comprehensive and detailed description of the ICA analysis employed in this research). This analysis allowed the approval of final codes. Subsequently, the entire data set was systematically coded by the two independent coders. In the third phase, the researchers embarked on the search for themes by analyzing the generated codes and identifying potential thematic patterns. The fourth phase involved the creation of a thematic map, where the codes and themes were organized in a taxonomic order at micro-, meso-, and macro-levels. Moving to the fifth phase, the identified themes were given appropriate names and definitions and analyzed within a broader context. Finally, in the sixth phase, the researchers compiled the results of the analysis, presenting illustrative examples and providing a commentary on their findings.

Quotation	Code	Theme	Stage
<i>Digital systems are too easily manipulated, hacked or misused in many other ways. How could the system be made completely safe, trouble-free or otherwise not misused? The system does not promote individual freedom and is a completely obvious copy of the Chinese communist system, where people are scored and their rights are restricted.</i>	Data security risks / Hacking	Cyber Security and Digital Vulnerabilities	Meso-level
	Lack of Freedom and Self-Determination		
<i>Digital systems are too easily manipulated, hacked or misused in many other ways. How could the system be made completely safe, trouble-free or otherwise not misused? The system does not promote individual freedom and is a completely obvious copy of the Chinese communist system, where people are scored and their rights are restricted.</i>	Social Credit System / Chinese Society	Distrust and Lack of Freedom Democracy at Stake	Macro-level
	Weakening of Democracy		
	Restrictions and Penalties		

FIGURE 9. Process of forming codes into themes.

As a method, inductive thematic analysis has numerous advantages and limitations. To begin with, using data-driven codes that are built from raw data is more likely to result in higher inter-coder reliability. When the coder is closer to the raw data, the interpretation is more likely to be similar between coders. In addition, working with raw data increases the probability of valuing the data and gives the researcher a broader overall picture, which in turn creates an opportunity for the researcher to also value the easily evident and difficult-to-discern features of the information. (Boyatzis, 1998.) At the same time, in inductive thematic analysis, it is important to consider the researcher's position and the limitations it creates for the research. Themes generated through



inductive analysis are analytical outputs that are built through the researcher's active and subjective process and are not passively present in the data. For this very reason, having more than one coder working on the analysis is more likely to produce a more nuanced understanding of the data (Braun et al., 2016.)

### 4.5.3 Inter-coder agreement analysis

The calculation of inter-coder agreement, a critical component of the research process, serves to validate the reliability, coherence, and consistency of the analysis and data interpretation (MacPhail et al., 2016). It is essential to achieve a high inter-coder agreement percentage to minimize unsystematic or distorting variations in coding interpretations (Bayerl & Paul, 2011). In this study, the Atlas.ti was employed to conduct inter-coder agreement (ICA) analysis, which played a pivotal role in three phases of the thematic hybrid analysis.

Firstly, prior to the inductive analysis, ICA analysis was applied to evaluate the preliminary codes derived from the data. The obtained result of 84.6% surpassed the minimum accepted threshold of 80% (Bayerl & Paul, 2011), indicating that the proposed codes could be considered as final codes. Secondly, after defining both inductive and deductive codes, ICA analysis was utilized to test the consistency and reliability of two independent coders. This analysis was conducted during the middle stages of coding the data set, specifically at the 250th statement (491 statements in total), achieving an acceptable result of 88.3%. Lastly, after completing the entire coding process, ICA analysis was performed again, resulting in an inter-coder agreement percentage of 86.7%, which exceeded the acceptable limit. These findings demonstrate the reliability and consistency of the coding process in this study, providing confidence in the accuracy of the interpretations derived from the data.

TABLE 3. Conducted inter-coder agreement (ICA) analyses.

Phase	Objective	Percent agreement
<i>Prior to coding</i>	Testing preliminary inductive codes prior to their acceptance	84.6% (>80% accepted)
<i>During coding</i>	Assessing the consistency and reliability of two independent coders in the halfway of coding the data set	88.3% (>80% accepted)
<i>At the end of coding</i>	Conducting a final ICA analysis between two independent coders after coding the entire data set	86.7% (>80% accepted)

#### 4.5.4 Co-occurrence analysis

To analyze the relations between the deductively coded misinformation types and the inductively coded themes found in the statements, a co-occurrence analysis was conducted. The Atlas.ti software was utilized for this. The basic principle of co-occurrence analysis is that it studies the number of co-occurring entities within a range of units while searching for potential relations between the units (Xiaobei et al., 2022). The aim of the analysis was to reveal any potential relationships between the types of misinformation and the themes that occurred in the statements. This was done to answer the research problem of the thesis, which was to clarify what kind of phenomenon misinformation is in the public sector. After conducting the analysis in Atlas.ti, the results were analyzed, and initial conclusions were drawn.

#### 4.6 Research ethics

When conducting research, it is essential to be aware of the ethical dilemmas that may surface during the process. The research should follow ethical principles throughout. However, this might be challenging as ethical issues are multidimensional and there are no straightforward answers (Wiles, 2012). However, all guidelines aim for the dignity, autonomy, protection, and safety of all involved and aim to maximize the benefits of the study while minimizing the possible harms that may occur (Markham & Buchanan, 2012).

Common ethical principles in qualitative research are informed consent, respect for autonomy, the right to privacy or confidentiality, nonmaleficence, beneficence, fairness, the safety of the researcher, and data protection (Walker, Holloway, & Wheeler, 2005). While all these factors were taken into consideration during the research, the key ethical issues faced were informed consent, the right to privacy, and fairness. Since the data used in this research is public, it brings out the ethical dilemma of using public data in research. Even if the data were accessible and public, it does not necessarily mean that the usage of the data is ethically acceptable (Laaksonen, 2023). The ethical dilemma with using public data is the lack of informed consent. Informed consent suggests that the research subjects should be informed that they and/or their data are being used in research (Franzke et al., 2020). The use of public data also brings out the issue of General Data Protection Regulation (GDPR), which may risk the subjects' right to privacy. When handling personal data, there needs to be a legitimate basis for processing it for research. The legitimate basis can be either explicit consent or the exercise of official authority regarding the public interest (Ahtensuu, 2019). In addition to this, according to the European Union's general data protection regulation, the subject of the research should be informed when their personal data is being processed (European Council, 2022). However, the issue is not so simple. An exception to this rule is when processing large amounts of data where the subjects are hard to reach (Laaksonen, 2023) or the processed information is particularly made public (Ahtensuu, 2019).

This research aimed to solve any ethical dilemmas regarding the chosen data before continuing the research. Since the selected data for this research is large and it is not possible to reach all people issuing statements, researchers were unable to inform the subjects about using their statements as the data in this research. However, since the statements were not posted on social media channels but to the Ministry of Justice's website, *lausuntopalvelu.fi*, the person issuing the statement needed to accept the website's privacy policy before writing a statement. This discloses that people were aware of their statements' public nature, and thus consent for using the statements has been given. To ensure that there were no ethical dilemmas with the chosen data, the issue was brought up to the University of Jyväskylä's Research Integrity Board for an ethical review, and after allowing the chosen data, researchers were able to continue with the research. Ethical review means the observation of the ethical dilemmas of a planned or ongoing study, and it emphasizes the prognosis of the disadvantages incurred from the research or its results for the subject of the research (University of Jyväskylä, 2023).

An ethical issue faced throughout the research regarding the fairness of the study is the researcher's bias. The qualitative research method often leaves an opportunity for the researcher to introduce bias into the findings (Walker et al., 2005). In this research, objectivity was preserved by trusting the data to provide the correct results. The research was conducted without creating strong hypotheses or a clear aim for the results beforehand, but the data was analyzed objectively. As there are two researchers in this study, the countability of objectivity was emphasized in the associations between researchers.

## 5 RESULTS AND ANALYSIS

In this chapter, the study's findings are presented in conjunction with prior research. The aim of this study was to examine what kind of phenomenon misinformation is in the context of public sector communication. The research problem was approached through the following research questions:

**RQ1:** Does misinformation occur in citizens' statements on digital identity legislation?

**RQ2:** What kinds of topics did citizens link to their statements on the digital identity legislation?

To address the first research question, this chapter provides an analysis of the presence of misinformation in the citizen statements. Following this, the chapter proceeds to examine the various topics identified in the statements, exploring their occurrence across different levels, in order to answer the second research question. Lastly, the chapter introduces the co-occurrence of different types of misinformation alongside the identified topics.

### 5.1 Misinformation's appearance in citizen statements

As presented in previous chapters, the types of misinformation were examined deductively. The codes were based on previous theory, and all 491 statements were coded into one of the seven misinformation types. From the 491 statements examined, 67% (330, n=491) were found to contain misinformation. 6% (29, n=491) of all statements were found to be exaggerated factual information. This means that the information has a factual basis, but the exaggeration makes it misleading and false (Osman et al., 2022). This kind of information includes, e.g., contextualization 18 (4%, n=491) and misleading content 11 (2%, n=491). The biggest portion of misinformation identified was based on an uncertain factual basis. This means that 53% (260, n=491) of all statements were made based on

information that is uncertain or vaguely relies on facts (Osman et al., 2022). This kind of information was found in this research in 177 (36%, n=491) premature conclusions and 83 truth judgments (17%, n=491). Finally, 8% (41, n=491) of all statements were found to have no factual basis. Statements coded as misremembering 6 (1%, n=491) and inaccurate beliefs 35 (7%, n=491) were found to be based on non-factual information, but people still draw conclusions from this information (Osman et al., 2022). Figure 10 below illustrates the misinformation spectrum and the appearance of different types of misinformation in the statements.

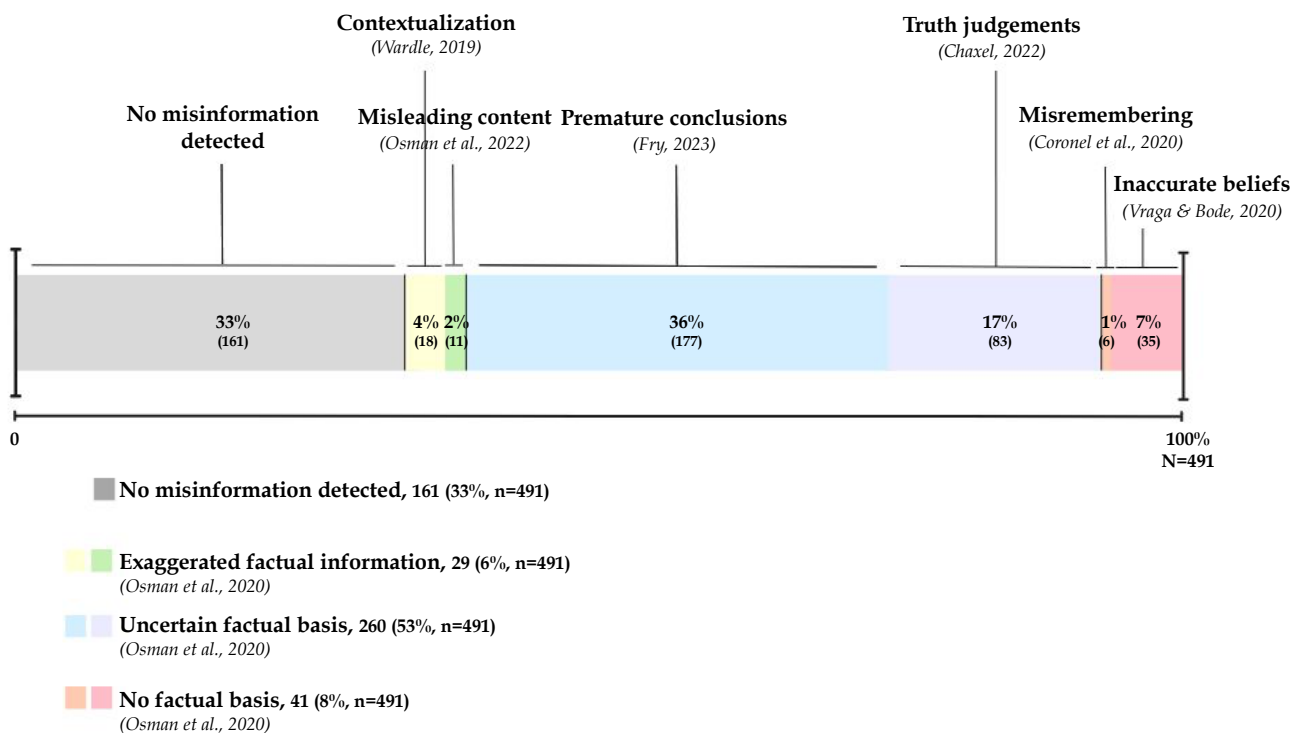


FIGURE 10. The occurrence of misinformation in the statements presented as a misinformation spectrum.

### 5.1.1 Conclusions made in the statements

The biggest portion of misinformation detected in the data was 177 (36%, n=491) premature conclusions. These statements were found to contain assumptions based on an obscure origin. Premature conclusions describe hasty conclusions drawn from incomplete examinations without certainty (Fry, 2023). Hence, a notable portion of the misinformation identified in the statements is caused by straight and premature causality done by the person issuing the statement.

A STRICT NO: Do you want to take Finland towards totalitarianism and China's model? If you don't do as we say, your rights to do certain things will be revoked.

The whole proposition, its goals, and its solutions are completely against humanism and humanity, which do not contain 24/7 digital control. I absolutely resist the digital ID-passport; it is a straight road to a totalitarian control society. People need to have the freedom to be, come, and go without any digital control from society.

Although these statements do not intentionally spread misinformation, the drawn conclusions make the outcome misleading, and thus the statements contribute to the spreading of misinformation. In addition to this, the spreading of misinformation was visible in the statements as presented in the theory section of this thesis (Figure 1). As the statements were published throughout the request period, statements containing misinformation enabled the spreading of misinformation further as other people read these statements as the truth. This supports the claim made by Wardle and Derakhshan (2017) that the spreading of misinformation often stems from people re-sharing information they have accepted as the truth, even if there is no scientific basis for it. In a sense, the request for an opinion was self-destructive as it enabled the progression of misinformation inside the request service. The progression of misinformation begins with people accepting false information as the truth (Cook, Lewandowsky, & Ecker, 2017). In this instance, people issuing the statements accepted previously published statements as the truth and treated them as credible sources. The progression of misinformation continues as these people share this false information as the truth and unintentionally take part in the spreading of misinformation (Wardle & Derakhshan, 2017). Some statements were influenced by previously published statements and thus furthered the progression of misinformation. The outcome of the progression of misinformation is that as people truly believe in the information they spread, the spreading of misinformation is difficult to stop, and hence the progression continues (Ireton & Posetti, 2018). The communal experience visible in the statements strengthens the experience of being "right" and thus exacerbates the implementation of necessary corrective efforts.

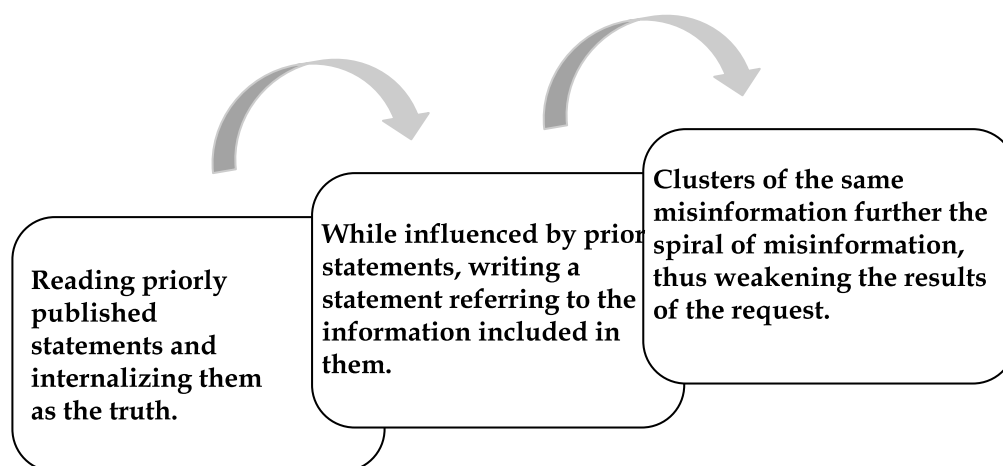


FIGURE 11. The progression of misinformation in citizen statements (Cf. Figure 1).

The progression of misinformation was clearly visible in the statements. Some statements referred to other statements, as some statements were entirely or partly copied.

I oppose the digital identity legislation. Below is a statement given earlier regarding the subject that comprehensively includes my view of the problems involved with the proposition:

Here is an excerpt from the statement made by (name), which I totally agree with:

The previous statements were then followed by quotations from previously published statements. This confirms that the people issuing statements read the published statements before writing their own and were thus even slightly influenced by them.

### 5.1.2 The impact of prior experiences to the statements

The second-biggest proportion of the statements 83 (17%, n=491) were categorized as truth judgments. People tend to rely on their prior knowledge when encountering information, i.e., truth judgments (Chaxel, 2022). This means that numerous people referred to prior experiences or prior knowledge in their statements and thus took a stand on the issue through the "lenses" of their prior understanding. It can be ascertained from the data that truth judgments follow the fundamental cognitive principle of the bias to extract meaning from information (Stanley et al., 2022). This means that people have a tendency to internalize new information by reflecting on prior expectations.

The development trend where all services and functions are under the digital passport is very worrying. Digital identity theft and misuse will be a problem in the future. If the terms and demands of this passport keep getting changed until you are entitled to

services, there is a risk that citizens' fundamental rights will be stamped on, as this government has been in the habit of doing so systematically.

The ultimate question is: when an infrastructure that enables digital 24/7 control has been built, do you trust 100% that it will never be, under any circumstances, used by someone to monitor citizens or to subjugate and violate the human rights of Finnish citizens?

I do not trust this, and I hope no one will, since we have an example of this with the mandatory vaccinations of SOTE workers, which is 100% about subjugating people.

57 (69%, n=83) of all statements coded as "truth judgments", also contained the code "COVID-19". This leads to the belief that the government's decisions and functions during the pandemic have greatly weakened the trust of some citizens. When presented with the legislation on digital identity, some citizens portray the legislation through their experiences with the COVID-19 passport.

I do not support digital identity in any way, as it will include all of our personal information, including health information, and such certificates are easy to control. Additional information will be added to the digital identity, and if the information is not up-to-date, liberties will be restricted or taken away. We saw this during the pandemic with the COVID-19 passport operations. It is a human rights violation.

I do not support this; the current system works well! Faith and trust in authorities have been severely shaken by the incidents experienced in recent years regarding new magnificent laws and the change of existing laws! I do not want a controlled society.

Some statements even misinterpreted the request to cover vaccinations, and the submitted statements were entirely beside the point of the original request and the legislation behind it. Other statements suggested that the COVID-19 operations and the digital identity legislation are linked together and that the COVID-19 regulations were part of a bigger agenda – i.e., the digital identity.

A global group of doctors and specialists has stated that vast scientific evidence proves undeniably that COVID-19 vaccinations are useless, ineffective, and overall unhealthy. Therefore, there are no medical grounds for the use of COVID-19 passports, and instead of expanding their usage, the concept should be immediately and entirely given up.

The COVID-19 pandemic and its prevention acted as an excuse to introduce the COVID-19 passport to citizens. Many people think that the COVID-19 passport was created because of the pandemic and that its (unsuccessful) aim was to prevent the spreading of the infection. This is false. The COVID-19 pandemic has acted as a screen for selling the idea of digital identity to citizens; the propositions existed long before the so-called pandemic. The launch of the COVID-19 passport created an artificial link between liberties, basic human rights, and physical conditions (vaccination status).

Thus, the impact of COVID-19 on the legislation of digital identity is evident and undeniable. That is why it is essential that efforts to debunk the misinformation take this into consideration.



### 5.1.3 The occurrence of inaccurate beliefs in statements

Some of the statements contained information that can be labeled as inaccurate. Information that is contrary to the best available evidence from relevant experts can be considered as inaccurate beliefs (Vraga & Bode, 2020). This means that 35 (7%, n=491) of all statements were completely against the general belief and thus were coded as inaccurate.

I oppose the use of digital identity as a way to diminish people's freedom and as a tool of control. We were born to be free in this world, and the current identity verification systems are enough. Identification with internet banking personal codes and passports is secure enough for this. In pursuance of the COVID-19 vaccination, each vaccinated person got a microchip that is visible with Bluetooth LE scanner software. The MAC addresses of the microchips are different for every person! This "chipping" of citizens is illegal and a human rights violation globally.

Digital identity is a tool to implement run-downs and confiscate the property of people. The government administration has completely forgotten its employer, aka the Finnish public. Ministers (Prime Minister Sanna Marin and Minister of Finance Annika Saarikko) planted by WEF's (World Economic Forum's) Klaus Schwab do not take care of Finnish citizens' business but, in addition to the on-going GENOCIDE are trying to wreck the whole country with their illegalities. WEF's director Klaus Schwab has boasted that he has planted his own moles in governments globally, and it is no secret that Prime Minister S. Marin and Finance Minister A. Saarikko are Nazi beasts trained by Schwab. The Finnish mortality rate during spring 2022 is proof of this ongoing genocide.

As visible in the previous statements, the people issuing the statements have actual concerns about the safety and intentions of the legislation. However, the facts presented in them are against general knowledge, and the delivery of the opinion is done in a way that weakens the desired message and outcome. The concern for the weakening of democracy is clearly visible in the statements, as 33 (94%, n=35) of all statements coded as "inaccurate beliefs" also contained the code "weakening of democracy". Out of all misinformation types, the code "weakening of democracy" appeared most frequently in inaccurate beliefs. This indicates that although the information included in the statement is inaccurate, the concern behind it is real, and there is a clear need for it to be debunked.

### 5.1.4 Statements based on an uncertain factual basis

The majority of the statements were based on an uncertain factual basis. This means that 53% (260, n=491) of the statements were based on information whose source is unknown or cannot be verified. In this research information based on an uncertain factual basis included 177 (36%, n=491) premature conclusions and 83 (17%, n=491) truth judgments. Misinformation types can be divided into three categories based on the source and the basis of the information as follows: *exaggerated factual information*, *information with an uncertain factual basis*, and *information with no factual basis* (Osman et al., 2022). Osman et al. (2022) suggest in their research that further research be conducted to examine which of these types is most prone to misinformation. While the research conducted in this

this thesis does not aim to answer this, the data suggests that most misinformation is based on information that has an uncertain factual basis. This indicates that public organizations should navigate their debunking efforts to emphasize this kind of information.

As information based on an uncertain basis is broadly affecting the efficiency and aim of the request, authorities should focus on the debunking of such information. As previously presented in this thesis, the debunking of such information should include counter-arguing to enhance the media literacy of people (Chan et al., 2017). By counter-arguing the most popular arguments made on an uncertain basis, the amount of specific misinformation could be reduced, and citizens could learn to identify reliable sources of information. Another way to decrease the amount of misinformation based on an uncertain factual basis is for authorities to make a retraction report (Chan et al., 2017). The report should include extensive information about the request, the legislation, its aims, and its execution. It is essential to create an alternative narrative when debunking current misinformation by providing additional information that substantiates the current information as false or uncertain (Lewandowsky et al., 2012).

## **5.2 Overview of the topics in citizen statements**

Through the analysis of citizens' statements regarding the digital identity legislation, seven themes were identified and named as follows: (1) Resistance to Change, (2) Democracy at Stake, (3) Control & Lack of Freedom, (4) Data & Technology Risks, (5) Public Organizations, (6) Public Finance, and (7) COVID-19. Figure 12 provides a visual representation of the themes and codes used in this study, effectively illustrating the topics reflected in the citizens' statements. Each theme is briefly described below, along with the corresponding number of statements associated with each theme, as depicted in Figure 13.

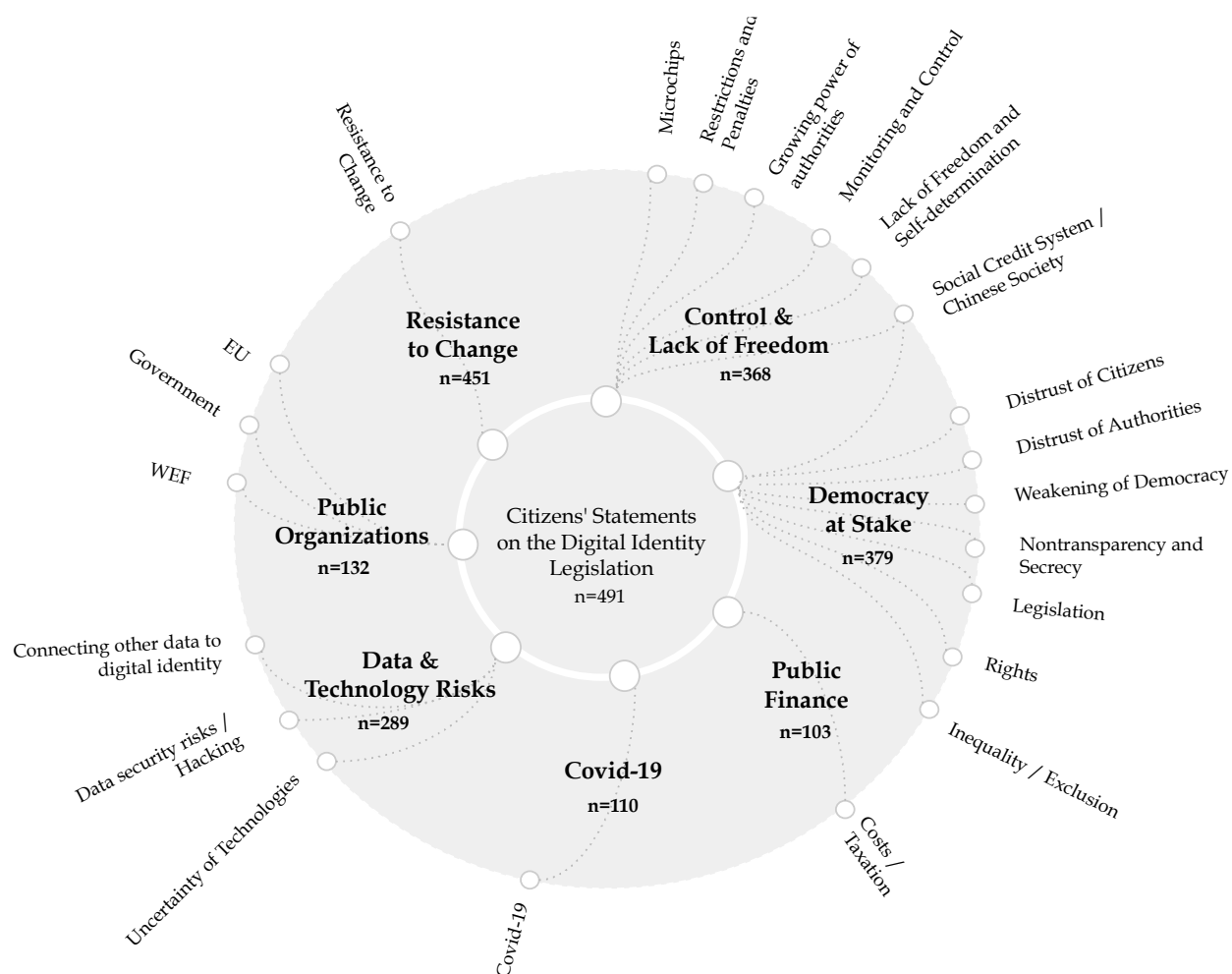


FIGURE 12. Formation of themes in citizens' statements on the digital identity legislation.

The first theme, *Resistance to Change*, primarily consisted of statements expressing reluctance or opposition to altering conditions or adopting new approaches. This theme was the most dominant, appearing in nearly 92% (91.9%,  $n=451$ ) of the statements. Resistance was manifested in various forms, such as general pessimism towards the digital identity project or targeted resistance towards digital transformation.

The second theme, *Democracy at Stake*, appeared in over 77% (77.2%,  $n=379$ ) of the statements and encompassed a range of concerns regarding the erosion of the Finnish social system. These concerns included mistrust towards both authorities and citizens, lack of governmental transparency and secrecy, growing social inequality and digital discrimination, and overall apprehension regarding the decline of democracy. This theme also encompassed statements suggesting that the project violated the law or infringed upon fundamental rights. Moreover, statements portraying the digital identity project as leading Finland towards the Chinese social scoring system were included within this theme.

The third theme, *Control & Lack of Freedom*, also included statements that depicted China as a society characterized by extensive control and limited

freedom. This theme was present in three-quarters (75%, n=368) of the statements. Control & Lack of Freedom delved into sub-topics related to the reduction of individual freedom through mechanisms such as monitoring, control, restrictions, punishments, diminished self-determination, and the increased power of authorities. Concerns were also raised about the association of digital identity with subcutaneous human microchip implants.

The fourth theme, Data & Technology Risks, appeared in almost 60% (58.9%, n=289) of the statements and encompassed various anxieties associated with the technological implementation of digital identity. This category encompassed statements that perceived technologies and networks as uncertain and unreliable, with a general fear that digital identity would render society overly dependent on technology, potentially making owning a smartphone mandatory. Additionally, the inclusion of other personal information in the digital ID was viewed as a potential threat.

The fifth theme, Public Organizations, encompassed statements discussing public entities such as the Finnish government, the EU, or the World Economic Forum (WEF). This theme appeared in almost 27% (26.9%, n=132) of the statements.

The sixth theme, COVID-19, was present in approximately 22% (22.4%, n=110) of the statements and revolved around topics such as vaccinations, COVID-19 passports, or the broader context of the pandemic.

Lastly, the seventh theme, Public Finance, encompassed statements addressing the cost or expenses associated with the project, often perceived as excessive, as well as the allocation of government funds in an unfavorable manner. Statements pertaining to public finance accounted for just over 20% (21%, n=103) of the dataset.

Figure 13 describes how four of the themes, Resistance to Change, Democracy at Stake, Control & Lack of Freedom and Data & Technology Risks appeared in more than half of the statements, Resistance to Change being the most dominant. In general, the prevalence of themes in the statements was high and even the least frequently occurring themes, Public Organizations, COVID-19 and Public Finance, all had a prevalence of more than 20%. It is noteworthy that in the same statement, several themes often appeared simultaneously.

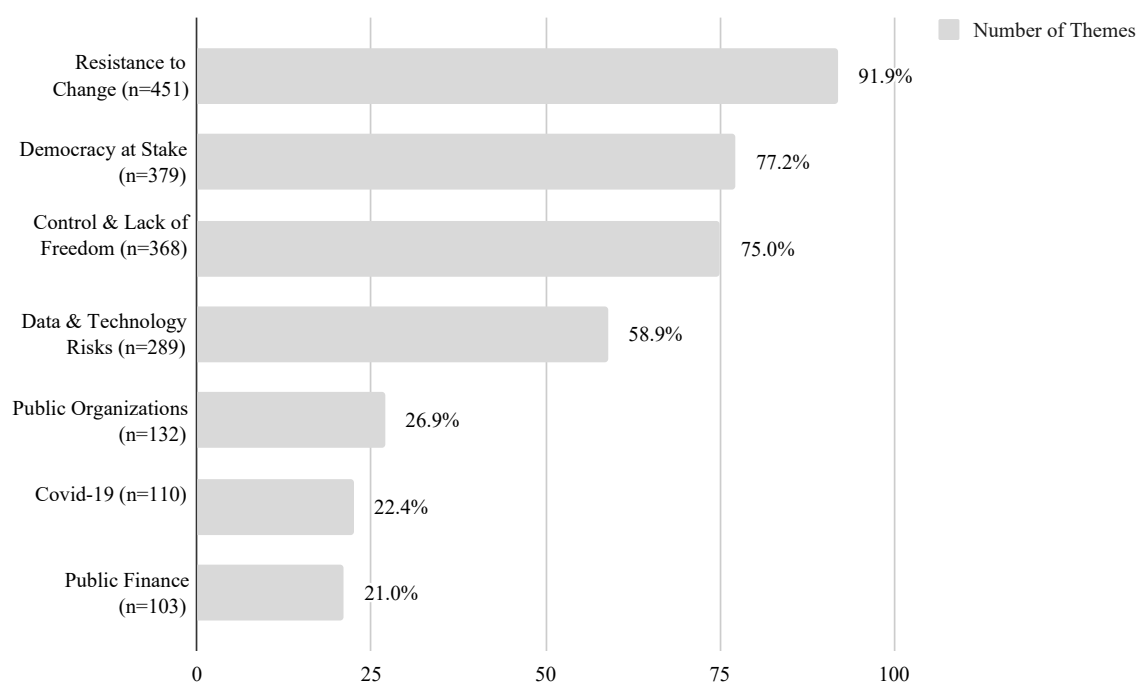


FIGURE 13. Number of themes in the statements. Numbers are presented as percentages of the data set (491 statements in total).

In order to get clarification to themes, thematic clustering to taxonomic levels was carried out. A taxonomy refers to the effort to empirically classify observed cases taking into account their measurable similarity (Bailey, 1994). In this study, the taxonomy is formed of three stages, as presented by Li (2012): *micro level* (individual actors), *meso level* (organizations) and *macro level* (social institutions). The taxonomy of the themes observed in this study is shown in Table 3. First, the themes that were most strongly related to the experiences of individuals, Resistance to Change and Control & Lack of Freedom, were situated on the micro level. Second, themes that dealt with topics in relation to organizations, Public Organizations and Data and Technology Risks, were situated at the meso level. Third, themes that dealt with issues on a broader societal level, Democracy at Stake, COVID-19 and Public Finance, were situated at the macro level. In the following subchapters, the themes are explored in more detail at the micro, meso and macro levels.

TABLE 4. A taxonomy of observed themes.

Stage	Definition	Themes
<i>Micro</i>	Level of individual actors	Resistance to Change Control & Lack of Freedom
<i>Meso</i>	Level of organizations	Data & Technology Risks Public Organizations
<i>Macro</i>	Level of social institutions	Democracy at Stake COVID-19 Public Finance

### 5.2.1 Topics at the micro level

When examining citizens' arguments at the level of individual actors, it was evident that concerns were predominantly related to the general refusal to accept the digital identity project and the proposed legislation. A negative attitude towards the project was shared by almost all citizens, with *Resistance to Change* being the most common theme identified in the statements. The use of prohibition expressions such as "I oppose," "I do not accept," "I do not support in any form," or "absolutely not" appeared frequently in the statements. Many citizens expressed their opposition to the project's implementation, stating that those in charge of it lacked the authority to do so, or that the project's effects would inevitably be negative.

I oppose the project and it should be abandoned immediately. The proposal is against the constitution and takes away our right to self-determination and freedom of choice.

Absolutely not, we don't need such a control system, the current one is quite sufficient.

I do NOT in any case and under no circumstances ACCEPT the introduction of digital identity and therefore the government's proposal as digital identity legislation!

I do not accept the idea as a citizen who has paid taxes all his life and has always lived according to the rules of society. My private information does not belong to the state or its partners, and my information is not allowed to be traded, as is happening here in practice.

Furthermore, a significant number of citizens expressed their opposition to the proposed law by rejecting the idea of digital transformation altogether. In these statements, the focus was on the functionality of current systems, with concerns raised about the reliability and fragility of new digital solutions. Digitization was

generally viewed as an unfavorable development, and the digital future was perceived as a threatening scenario. Some citizens strongly asserted that they would not grant permission for their data to be used in digital identity applications. What these statements opposing change had in common was the citizens' negative expectations regarding the project. As proposed by Lewicki et al. (1998), expectations of another's behavior are closely tied to the concept of trust, where positive expectations align with trust and negative expectations align with distrust. From this perspective, citizens' resistance to change and negative expectations towards digital identity can be interpreted as indications of distrust towards the project. Alternatively, the mismatch between expectations and actions can also be seen as a lack of legitimacy, as defined by Sethi (1975), leading to a legitimacy gap. Based on citizens' experiences, the responsible parties for the project were perceived to have acted significantly contrary to expectations. Therefore, the resistance to change experienced by citizens is likely to impact their judgments of the organization's legitimacy.

An absolute NO to digital passports and all monitoring. I will not give my consent to the use of my data in digital applications. Banknotes must be preserved.

A very big step towards a digital future that many of us do not want. The current identification system works very well.

I strongly oppose ALL transitions to digital systems. I find the electronic system very unreliable and a way of controlling everything and leading to abuse.

The theme of *Control & Lack of Freedom* emerged at the micro level, reflecting citizens' concerns about the potential restrictions and curtailment of their freedom. Many statements expressed apprehension that the adoption of digital identity in society would weaken the right to self-determination, personal freedom, and individual integrity. The focus was particularly on the perceived impact of digital ID on freedom of movement, employment opportunities, and the safeguarding of private life. Additionally, the legislation surrounding digital identity was viewed as a gateway to microchipping citizens, thereby intensifying control. The association between perceived control and lack of freedom was connected to the concept of trust. It was argued that where there is control, trust diminishes, and vice versa. However, the relationship between these concepts is not simplistic. Control can also foster trust-building processes, and conversely, control necessitates new forms of trust, such as trust in the controller or authorities (Castelfranchi and Falcone, 2000). Despite this complexity, citizen statements consistently portrayed digital identity as a mechanism that amplifies control in a detrimental manner, resulting in the restriction of rights and opportunities in everyday life. Increasing control was seen as the project's underlying objective, and as a result, citizens did not perceive trust in relation to authorities or the stated goals of the digital identity initiative.

I am absolutely against the digital Id passport, which is the way to total control societies. People must have the freedom to be, travel and go without digital control from society.

Digital ID aims to control citizens. There is nothing good about the project. The reality will be completely different. A digital identity card takes away the freedom to choose, the right to self-determination.

People are being followed too much and it violates individual freedom. Leads to microchipping of people, which is very worrying. The freedom to choose disappears, which leads to totalitarianism.

## 5.2.2 Topics at the meso level

At the organizational level, citizens have raised significant concerns regarding the potential *Data & Technology Risks* associated with digital identity. Many statements expressed apprehensions about the processing of their personal data and the overall security of the software systems involved. Digital identity was perceived as an uncertain and fragile system, susceptible to security breaches, hacking, identity theft, and abuse. Citizens were particularly worried about data security risks and the potential disclosure of personal information to third parties, whether for commercial purposes or increased surveillance. Furthermore, many citizens voiced their fear of becoming overly dependent on technology through digital identity. They believed that in situations involving network or technology failures, essential functions of society would be jeopardized. The risk of theft, power outages, or device malfunctions was also seen as potential drawbacks of implementing digital identity. These findings highlight citizens' underlying distrust in the digital identity system. This poses a significant challenge for the project because, as Luoma-aho (2015) suggests, trust forms the foundation of a strong organizational character upon which all communication is built. Additionally, Distel et al. (2021) emphasize that trust is a prerequisite for the successful adoption of digital applications by citizens. Thus, the perceived distrust among citizens could seriously impede the introduction of digital identity into society.

The digital identity card is justified by the fact that it creates a new, strong way of electronic identification. However, current methods can be used or developed for questionable identification. Despite the emphasis on data security, there has been criticism that precisely identified data enables service providers and potential third parties to whom data is further shared with the support of verification and identification to carry out precise analysis of personal data, profiling and user-directed control. Digital identity would thus deepen the possible misuse of data related to the person and the monitoring of the person's activities and content. When at the same time digitization also expands the amount of information available online, the field of this kind of screening



and control will expand and deepen in the future. Good intentions may not be redeemed in the digital infrastructure if the structure can be misused for purposes that were not foreseen or that were not reported. Identity theft as a threat, where absolutely everything can be taken from a citizen, in other words, in addition to identity, all property, health information and privacy. Privacy International sees discrimination, data misuse and citizen surveillance as key threats in the digital identity infrastructure. The problem is not only information security, which has been emphasized in digital identity, but the purposes for which the citizen's data can be shared, analyzed and further used.

Digital identity is associated with data security risks - if all citizens' data is stored in one place, it is an attractive target for hackers. In addition, the services are vulnerable. If there is an attack on the network, there is no access to the internet, the technology does not work for some reason, then the digital identity cannot be used, as it works over the network. For this reason, digital identity must not be the only method of identification and it must not replace a traditional physical passport. In addition, there are risks associated with digital identity if a person's phone is stolen or lost and the device ends up in the wrong hands.

Another prominent concern raised by citizens was the potential association of additional personal data, such as health or financial information, with the digital identity system. The linking of fundamental rights and freedoms to a digital identity or "passport" was perceived as a threat. Moreover, there were suspicions that the consolidation of personal data within the digital ID framework could increase the risk of abuse by authorities. In fact, one statement suggested that a digital identity could grant employers access to an individual's health data. Overall, citizens perceived digital identity as a vulnerable and risky means of transmitting sensitive information to organizations. Raaphorst and Van de Walle (2020) have highlighted the significance of establishing trust in both civil servants and citizens. Drawing from Spence's (1973) signaling theory within the context of the public sector, Raaphorst and Van de Walle (2020) propose that the interpretation of signals exchanged between citizens and the public sector is heavily influenced by the context in which these signals are sent and received. Therefore, if digital identity is seen as a moderating context wherein signals are exchanged between citizens and the public sector, a fundamental challenge for the public sector is to develop reliable signals that can assuage citizens' concerns and address the security risks associated with the digital identity system.

How to ensure the security of such an identity when everything can be hacked these days? How to ensure individual rights and secure confidentiality? How will freedom of speech be secured, where human rights, such as freedom of movement and work, are placed under such a passport?

If all the information about every citizen is behind a single QR code, how can we guarantee data security? In addition, the digital wallet and the central bank's digital currency can be programmed. How to prevent abuses also by the authorities?

The employer or any other parties should not have the right to know private personal information such as matters concerning the state of health, unless the person wants to tell them about it herself/himself.

At the meso level, the statements also addressed *Public Organizations*, with particular emphasis on the Finnish government, the European Union (EU), and the World Economic Forum (WEF). Numerous statements expressed disappointment and dissatisfaction with the current government, opposing its proposed digital identity legislation in parliament. Some statements also raised concerns about how the legislation could potentially grant new avenues for future governments to exercise power. On the other hand, digital identity was predominantly seen as an EU-driven project or a control mechanism that would empower the EU and its member states. The main concern was that the true purpose of digital identity had not been adequately communicated to the citizens. Moreover, the project was viewed as part of the broader agenda of the World Economic Forum, leading some citizens to perceive Finnish politicians as supporters of the WEF initiative. In relation to public organizations, the statements consistently emphasized the lack of transparency experienced by citizens. Many citizens expressed that they did not receive sufficient information about the activities of these organizations concerning digital identity, perceiving the project as obscure and shrouded in secrecy. Bowen (2010) highlights that transparency, from an organizational perspective, involves not only visibility but also comprehensibility of the organization's activities for stakeholders. Transparency holds value for organizations in terms of responsible governance (Erkkilä, 2012) and contributes to a democratic public sphere (Nanz & Steffek, 2004). According to the statements, citizens felt that information from public organizations did not flow openly to the public, and even when information was provided, it was often incomprehensible to them. The analysis indicates that citizens' perception of secrecy by public organizations may have contributed to a weakened assessment of the democratic nature of the public sphere surrounding digital identity.

If this ends up in the hands of a stranger, a person loses everything related to himself, and the damage can hardly be repaired. In addition, this opens up the possibility of digital and also physical "deletion" of a person for future governments - we cannot know what form of government we will have in a few decades.

As a citizen, I state that the digi-ID law is a citizen's eID control tool sent by the EU to its member states, and it does not promote the citizen's legal protection in services that require identification as presented. The goals and solution models of the proposal sound great, but the law also contains a great danger that the data collected in the digital ID application that identify and connect the identity of the citizen will give the EU and its member states a free hand to control their citizens and use the digi-ID for social as a means of scoring.

Every citizen who is even slightly enlightened understands that this is a global agenda driven by the WEF, which Finnish politicians are supporting with this project. I am absolutely against this project! No digital passport to Finland!

### 5.2.3 Topics at the macro level

The macro-level theme *Democracy at Stake* encompassed a range of concerns, all of which were linked to the potential erosion of democracy. In several statements, the digital identity project and the proposed legislation were viewed as pushing society further away from social stability and closer towards polarization and antidemocratic ideologies, such as dictatorship, anarchy, totalitarianism, civil war, Nazism, and even slavery. In particular, citizens were concerned about Particularly, citizens expressed apprehension that digital identity could be a stepping stone towards the implementation of a social credit system similar to that in China. These strong claims may be partially attributed to the alarming state of democracies worldwide, as highlighted by Freedom House (2023). The existence of global crises and uncertain times has fueled the rise of authoritarianism and tyrannical regimes, making the support and preservation of democratic processes an even more crucial task for societies across the globe. (Freedom House, 2023.) Unsurprisingly, these fears and threats were prevalent among the citizen statements.

If such a system is introduced, society will be split into two, where those who live outside the system will be subjugated out of society. This creates a class of outlaws who will fight such a totalitarian system to the death. With this plan, you are creating a civil war and causing suffering and destruction to our country.

The possibilities of using a digital identity card are very similar to the social credit system of the Chinese dictatorship, where the rights of citizens to participate in society and to realize the basic conditions of life can be arbitrarily regulated and limited by the government on any basis related to social status, consumption behavior, health, conviction, opinion, etc. We oppose this kind of centralization of power and the emergence of a control society both in Finland and in the European Union.

In these digital systems, people are being taken step by step to the Chinese model where every citizen can be monitored. As a result of surveillance, the rights of citizens are completely arbitrarily restricted, as we know is happening in China today.

The theme of Democracy at Stake was closely linked to citizens' perception of a lack of transparency in relation to the authorities and the digital identity project. Both the authorities and the media were accused of operating in secrecy and failing to engage in open discussions throughout the process. Statements revealed a sense that the project and its associated legal initiatives were developed behind closed doors, without providing citizens with sufficient and necessary information. Some citizens expressed that the goals of the proposal

were unclear or that the true intentions behind it had not been revealed. This perceived lack of transparency was intertwined with a broader sense of distrust towards authorities. The lack of transparency contributed to a general distrust, with concerns ranging from system security to compliance with legal regulations. Previous research has demonstrated a strong correlation between transparency and trust (Tsetsura & Luoma-aho, 2020; Norman et al., 2010; Porumbescu, 2017; Rawlins, 2008; Ihlen et al., 2022; Grimmelikhuijsen & Meijer, 2014). Rawlins (2008) suggests that as transparency increases, stakeholders' trust in the organization also tends to increase. Similarly, Ihlen et al. (2022) propose that transparency regarding uncertainties positively influences trust. Therefore, it can be argued that the citizens' distrust and the perceived lack of transparency are closely intertwined, each exacerbating the other. The lack of transparency fuels distrust, while the existing distrust reinforces the perception of a lack of transparency. These findings underscore the vital role of transparency in fostering trust and maintaining a healthy democratic environment. Addressing citizens' concerns and enhancing transparency is crucial for building trust and ensuring the successful implementation of initiatives such as the digital identity project.

You have also prepared the matter in complete silence. Why don't you publicly inform about these issues? The mainstream media does not inform about these either. Something like this has so much impact that it definitely deserves a wide open debate, if not a referendum. But when there is something obscure about the matter, all the information is hidden and silenced, just like the discussion about vaccine disadvantages. Stop preparing the project immediately.

I don't consider this reliable, or safe. I see this as a technology that destroys democracy and discriminates against citizens, as well as a means of control.

As for the authorities, I do not accept this proposed system here either. It is not reliable, and certainly according to the Finnish constitution, no one other than the doctor or nurse of your health center needs to see your own health information. No law "walks" over the constitution, so this development should be stopped now.

According to citizens, democratic stability was also undermined by discrimination and inequality reinforced by digital identity. Specifically, the concerns centered around the vulnerability of elderly individuals and people with disabilities, who were perceived to be marginalized and deprived of adequate support in the face of increasing digitalization. The citizens expressed fears about the widening exclusion and inequality in society, with some statements suggesting that digital identity could be employed as a tool of discrimination by authorities. Dahl's (1989) measurable democracy approach underscores the significance of inclusion and effective participation as central criteria for a democratic society. Similarly, the principle of deliberation emphasizes the importance of broad citizen participation in decision-making and policy formation (Chambers, 2003). It was evident from citizens' statements that the concern was that digital identity might hinder the ability of everyone to

participate fully in societal activities. Moreover, Chambers (2023) highlighted the concerns surrounding the fragmentation and privatization of the digital public sphere, emphasizing that this challenge is primarily a political issue rather than a technological one. The findings indicate the need for sensitivity in the development of digital identity and new legislation, ensuring a vigilant approach to identify and address political power structures that may further reinforce fragmentation.

The question arises how the older population is taken into account when such reforms are made. Rapid digitization has weakened the possibility of the older age groups to do business independently, because there has not been enough support from the government.

Equality has not been taken into account. People cannot be forced against their will to use a device in order to participate and be an active member of society. For special groups, digital tools can otherwise be insurmountably difficult to use. Not everyone even owns digital devices.

We can no longer influence what is allowed or prohibited at any given time, if we give the authority the opportunity to enact this law that enables DISCRIMINATION.

At the macro level, citizens expressed concerns regarding the implications of digital identity on *Public Finance*. Numerous statements highlighted the costs associated with the development and maintenance of a digital identity platform, with a particular focus on evaluating its financial impact in terms of public finances and government expenditure. Some statements indicated apprehensions that the project would impose excessive financial burdens on taxpayers. As Wæraas (2020) explains, citizens' assessments of organizational legitimacy within the public sector are strongly influenced by socio-political factors, and failure to meet taxpayers' expectations can engender a cycle of skepticism, potentially eroding legitimacy. Consequently, citizens who critically evaluate the cost of a digital identity project are likely to scrutinize the project's legitimacy more rigorously. On the other hand, Leftwich (2007) conceptualizes politics as a process that involves decision-making regarding resource allocation. From this perspective, the theme of public finance intertwines with the concepts of politics and policy within the features of public sector communication. Citizens express their discontentment with how resources are planned to be distributed, thereby expressing dissatisfaction with the decisions made by policymakers.

Producing and implementing a new digital service will cost taxpayers a lot. Finland cannot afford to waste resources on this. The current system is functional, let's continue with it.

The digital identity card will incur unreasonably high implementation costs and annual maintenance costs for the state. Its advantages and benefits are not commensurate with the risks, harms and costs to taxpayers.

The final theme addressed at the macro level centered around the COVID-19 pandemic, encompassing discussions not only regarding the corona passport and vaccinations but also exploring the broader social impacts and measures stemming from the pandemic. In many respects, the COVID-19 pandemic and its social consequences were seen as a precedent for how digital identity would influence society. According to statements, throughout the pandemic, e.g., actions taken by the government were perceived as discriminatory or unconstitutional and thus undermining the functioning of society. Khemani's research (2020) claims that during international crises like COVID-19, legitimacy is understood as the ability of leaders to get citizens to follow regulation and public orders. The citizens' disillusionment with authorities during the COVID-19 crisis was frequently linked, either directly or indirectly, to digital identity in many statements. Consequently, citizens' diminished assessment of the authorities' legitimacy was also reflected in their perceptions of the digital identity project.

The COVID-19 passport showed in the last six months how dangerous such a tool can be. People were discriminated against and excluded from services for no reason, even though the vaccine did not prevent infections.

A terrible example has been the corona passport, which is the precursor of this digital identity. The COVID-19 passport is a discriminatory tool that should not be used in any democratic state. The COVID-19 passport has been a complete flop in terms of human rights, fundamental rights and the constitution.

### 5.3 Co-occurrence of misinformation and central topics

Co-occurrence analysis was conducted using the Atlas.ti program to explore the connection between different types of misinformation and the seven identified themes. This analysis aimed to investigate how various types of misinformation co-occurred with each theme. It is crucial to emphasize that all 491 statements were categorized into all relevant themes that accurately represented them, allowing for multiple theme classifications. However, in terms of misinformation classification, each statement was assigned to only one type at a time. This means that while a statement could be associated with multiple themes, it was attributed to a single type of misinformation.

Figure 14 illustrates both the number of themes and the co-occurrence of misinformation with these themes within the statements. The detailed dataset for the co-occurrence analysis can be accessed in Appendix 3. Upon analyzing the occurrence of misinformation within different themes, it becomes evident that misinformation is widespread across the entire thematic taxonomy, encompassing the micro, meso, and macro levels.

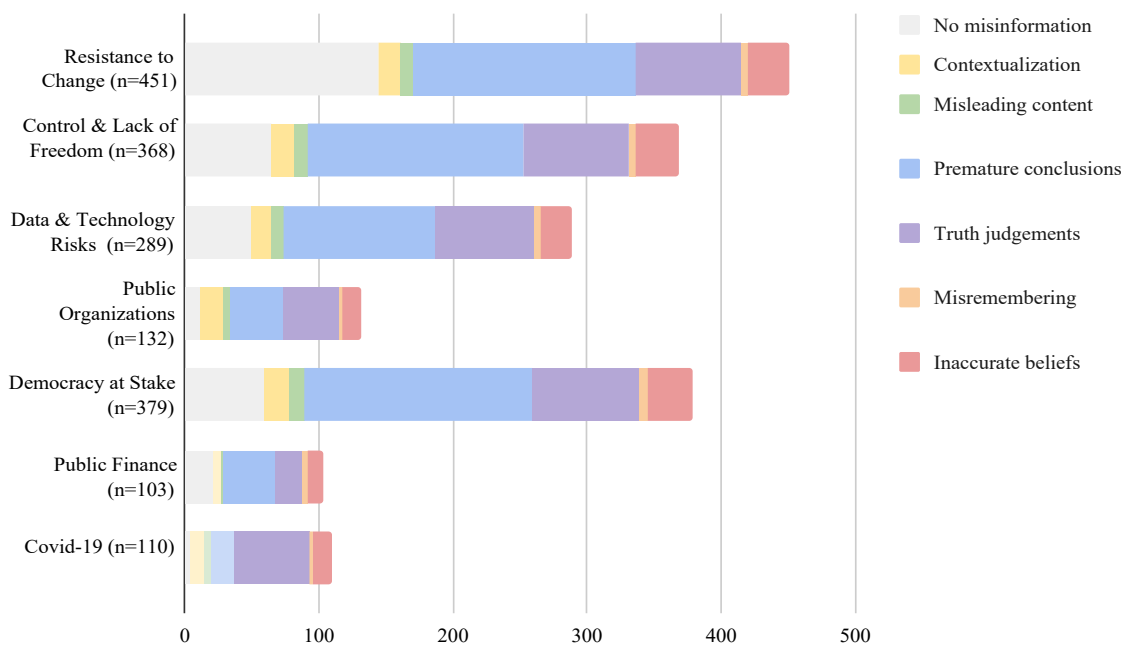


FIGURE 14. The number of themes in the research material and their co-occurrence with misinformation.

Among the various themes identified, the most prevalent type of misinformation was *premature conclusions*. This type of misinformation was extensively found in statements related to Resistance to Change (36.8%, n=451), Control & Lack of Freedom (43.8%, n=368), and Democracy at Stake (44.9%, n=379). Another common type of misinformation observed in conjunction with these prominent themes was *truth judgments*, which likewise appeared widely in statements connected to Resistance to Change (17.5%, n=451), Control & Lack of Freedom (21.5%, n=368), and Democracy at Stake (21.1%, n=379).

Additionally, it is worth noting that uncertain factual basis, encompassing premature conclusions and truth judgments, was the most frequent category of misinformation across all themes throughout the dataset. However, the theme least associated with misinformation was Resistance to Change at the micro-level, with about a third of the statements (31.9%, n=451) containing this theme not containing misinformation. This could be attributed to the high prevalence of this theme, as approximately 92% (91.9%, n=491) of the statements included Resistance to Change. Furthermore, many of the statements within this theme were brief, lacking proper argumentation, and expressing opinions rather than factual statements.

Moreover, the analysis revealed that the topic of COVID-19 had the highest prevalence of misinformation, accounting for over 96% of all statements (96.3%, n=110). A mere four statements covering the topic were found to be free of misinformation, indicating a significant presence of controversial information surrounding the pandemic. The second-highest amount of misinformation was identified in the topic of Public Organizations, with roughly 91% (90.9%, n=132)

of the statements containing misinformation. Notably, both themes contained more contextualization than any other topic.



## 6 DISCUSSION AND IMPLICATIONS

This final chapter discusses the results of the study and aims to answer the research questions. After concluding the findings of the study, theoretical as well as managerial implications are presented. Lastly, the thesis is critically evaluated by discussing the limitations of the study and providing suggestions for future research.

### 6.1 Conclusions

The principal objective of this study was to fill the existing research gap by investigating the phenomenon of misinformation within the context of public sector communication, with a particular focus on communication between society and citizens. Misinformation, being an integral component of information disorder, has garnered increasing scholarly attention due to its escalating prevalence in contemporary society (Brant et al., 2021). Information disorder, as a broader phenomenon, encompasses three distinct phases: creation, production, and distribution (Wardle & Erastian, 2017).

To achieve the research objective, the study aimed to identify potential instances of misinformation within statements generated by citizens, specifically concerning digital identity legislation. These statements were acquired through the utilization of the publicly accessible *Lausuntopalvelu.fi* service, a platform facilitated by the Ministry of Justice, that enables citizens to provide their input on legislative matters. The request for these statements was disseminated through the Ministry of Finance, which is responsible for overseeing the digital identity project. The following research question was utilized to identify potential misinformation within the statements:

**RQ1:** Does misinformation occur in citizens' statements on digital identity legislation?

According to the research conducted, misinformation was significantly apparent in citizens' statements on the legislation of digital identity. Of all 491 statements published on the service *lausuntopalvelu.fi*, 67% (330, n=491) were recognized to

contain misinformation. Thus, misinformation can be seen as a relevant issue for the Ministry of Finance issuing the request for an opinion. The research did not only aim to recognize if the statements contained misinformation but also to specify what kind of misinformation was most present in the statements. In accordance with the deductive coding process, the statements containing misinformation were coded into one of the following six categories: (1) contextualization, (2) misleading content, (3) premature conclusions, (4) truth judgments, (5) misremembering, or (6) inaccurate beliefs. The mentioned code categories were then divided into broader upper categories according to the basis of the said information in each misinformation type. These upper categories, adapted from Osman et al. (2022), were: (1) exaggerated factual information, (2) uncertain factual basis, and (3) no factual basis. Contextualization and misleading content were found to be based on an exaggerated factual basis; premature conclusions and truth judgments were categorized with an uncertain factual basis; and statements coded as inaccurate beliefs or misremembering were found to have no factual basis. This kind of categorization enabled a broader analysis of the phenomenon as it offered additional information regarding each of the misinformation types.

According to the research, the majority of the identified misinformation in the statements was based on an uncertain factual basis, as premature conclusions and truth judgments covered 53% (260, n=491) of all statements, with premature conclusions taking over 36% (177, n=491) and truth judgments 17% (83, n=491) of all statements. Exaggerated factual information was recognized in 6% (29, n=491) with contextualization 4% (20, n=491) and misleading content 2% (10, n=491) of all statements, and information with no factual basis was identified in 8% (39, n=491) with misremembering 1% (5, n=491) and inaccurate beliefs 7% (34, n=491) of all statements. Since the vast majority of the identified misinformation in this research is based on an uncertain factual basis, the authorities responsible for official communication should take this into account when preparing their debunking and prebunking efforts. Judging from the nature of the most prominent misinformation in the statements, the people issuing the statements do not have a comprehensive understanding of the subject prior to taking a stance. This indicates that the amount of misinformation could be regulated by providing adequate information to citizens regarding the subject.

The second research question aimed to provide a deeper understanding of the context in which disinformation could potentially arise within the public sector. The question was as follows:

**RQ2:** What kind of topics did citizens link to their statements on the digital identity legislation?

The study found that the majority of citizen statements on digital identity and the proposed legislation were critical and unfavorable. In this research, the seven themes identified and organized into taxonomic levels were as follows: at the *micro level* (1) Resistance to Change and (2) Control & Lack of Freedom, at the

*meso level* (3) Data & Technology Risks and (4) Public Organizations and finally at the *macro level* (5) Democracy at Stake, (6) COVID-19 and (7) Public Finance. The analysis sought to find theoretical associations between the identified themes and the characteristics of public sector communication. Figure 15 aims to organize and structure the thematic associations, along with the taxonomic arrangement of themes, in relation to key concepts of public sector communication: democracy, trust, organizational legitimacy, transparency, politics and policy.

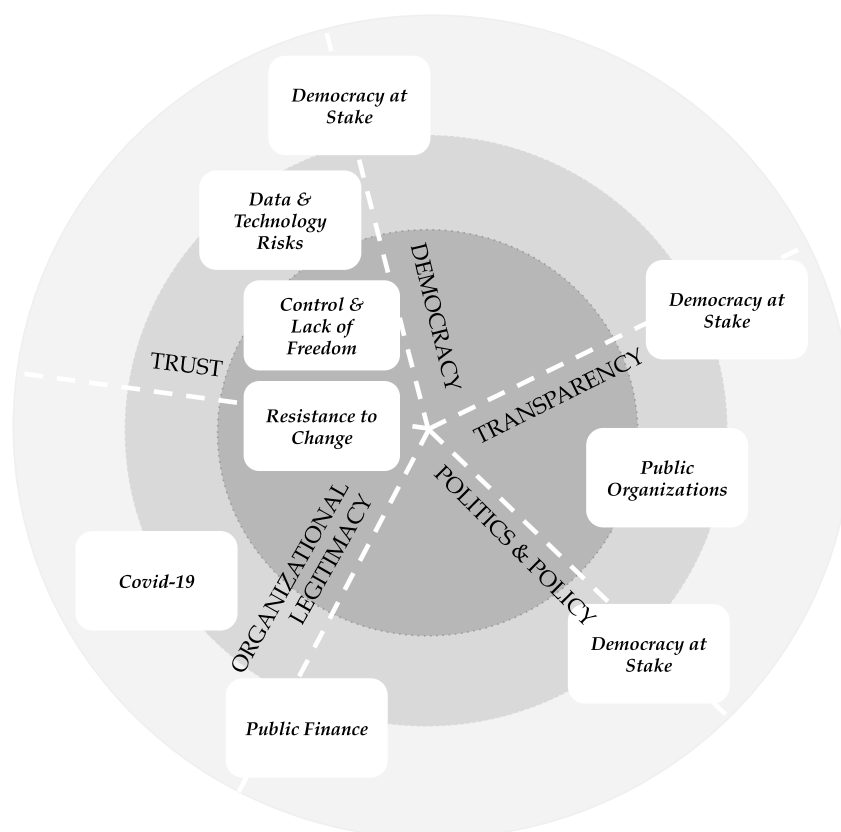


FIGURE 15. Themes and the characteristics of public sector communication.

To begin with, the micro-level theme Resistance to Change included statements where individuals expressed their dissatisfaction with the digital identity project. This theme was closely associated with the concepts of legitimacy and trust. (See eg., Sethi, 1975; Lewicki et al., 1998.)

Second, the micro-level theme Control & Lack of Freedom represented the fear of jeopardizing the right to self-determination, personal independence, and integrity. This theme was related to the concept of trust because of the perceived increase in control. (See eg., Castelfranchi and Falcone, 2000.)

Third, the meso-level theme Data & Technology Risks covered statements related to concerns about the security and unpredictability of the digital identity system, as well as the linking of additional personal data with the digital ID. This theme was also linked to the concept of trust due to the skepticism of the public

towards the technological and digital application of digital identification. (See eg., Distel et al., 2021.)

Fourth, the meso-level theme Public Organizations featured statements that highlighted the perceived lack of transparency of public organizations, which was manifested as both a lack of visibility and a lack of comprehensibility. On that basis, the concept of transparency was connected to this theme. (See eg., Tsetsura & Luoma-aho, 2020; Holzner and Holzner, 2006.)

Fifth, the theme Democracy at Stake was adopted in conjunction with statements that viewed digital identification as a serious threat to democracy. Digital ID was perceived as undermining social stability, increasing inequality, and encouraging discrimination. Additionally, citizens thought that the project and authorities lacked transparency. Thus, the four features of public sector communication – democracy, trust, transparency, and politics & policy – were associated with the theme of Democracy at Stake. (See eg., Chambers, 2023; Dahl, 1989; Freedom House, 2023; Bouckaert, 2012; Erkkilä, 2012.)

Sixth, statements under the macro-level theme of Public Finance underlined the concern of citizens regarding the effect of digital identification on the public economy. Citizens, who also act as taxpayers, complained that their expectations had not been satisfied and that, in their perspective, resources are not distributed properly. For these reasons, the features of legitimacy, politics and policy were associated with the theme of Public Finance. (See eg., Waeraas, 2020; Leftwich, 2007).

Finally, the macro-level theme of COVID-19 addressed complaints about the government's inadequate handling of the pandemic. This was seen as a direct and indirect precedent for the adoption of digital identity. Citizens' diminished legitimacy judgments of authorities in the aftermath of the COVID-19 pandemic were also reflected in the digital identification project, which is why this theme was linked to the concept of legitimacy. (See eg., Khemani, 2020.)

In sum, the organization of associations makes visible how, in the statements, a lack of trust experienced by citizens towards digital identity or the authorities behind it, appeared most frequently. At the same time, macro-level themes were emphasized in the findings, with Democracy at Stake appearing in connection with several aspects of public sector communication.

To provide valuable insights into the context of misinformation within public sector communication, a co-occurrence analysis was conducted. It is important to note that in this study, all 491 statements were categorized into appropriate themes that accurately reflected their content, allowing for multiple theme classifications. However, when it comes to classifying misinformation, each statement was assigned to only one type at a time. This means that while a statement may align with multiple themes, it was attributed to a single category of misinformation. The co-occurrence analysis revealed the presence of misinformation across all levels of the thematic taxonomy, encompassing the micro, meso, and macro levels. Among the various themes examined, the category of misinformation most observed across all themes was identified as "uncertain factual basis." Notably, two specific themes, namely COVID-19 and

Public Organizations, exhibited a particularly high prevalence of misinformation. For the COVID-19 theme, over 96% (96.4%, n=110) of the statements analyzed contained misinformation, while for the Public Organizations theme, more than 90% (90.9%, n=132) of the statements were identified as misinformation.

## 6.2 Theoretical implications

The main purpose of this study was to explore the phenomenon of misinformation in the context of public sector communication. It aimed to develop a unique typology of misinformation that could be specifically applied within the public sector context. Prior research has established typologies regarding different information influence activities, e.g., the different information influence techniques by Pamment et al. (2018) and the different types of mis- and disinformation by Wardle (2019). While both of these categorizations offered insight into the process of this research, they did not provide sufficient information about the phenomenon of misinformation. Furthermore, the demand for additional misinformation typologies was highlighted in prior literature (Ruokolainen et al., 2023). Therefore, a unique typology of misinformation types that combines the source and the cause of misinformation was established to meet the requirements of this research. The typology includes a categorization adapted from Osman et al. (2022), which disperses into three upper categories regarding the basis of the information: (1) exaggerated factual information, (2) uncertain factual basis, and (3) no factual basis, and additionally divides these categories into six types of misinformation on the strength of prior literature: (1) contextualization (Wardle, 2019), (2) misleading content (Osman et al., 2022), (3) premature conclusions (Fry, 2023), (4) truth judgments (Chaxel, 2022), (5) misremembering (Coronel et al., 2020), and (6) inaccurate beliefs (Vraga & Bode). A categorization of this kind enables a broader study of the phenomenon while combining the findings of previous researchers.

In recent years, the prevalence of misinformation in our society has grown significantly (Osman et al., 2022). Scholars have acknowledged the importance of understanding how misinformation manifests in various contexts and within the natural communication environment of citizens (Ruokolainen, 2022; Ruokolainen et al., 2023). This study aimed to enhance our understanding of misinformation within the context of public sector communication, an area that has received limited research attention thus far. The findings of this study revealed a prevalent presence of misinformation in the communication between society and citizens, with a substantial 67% (n=491) of the analyzed citizen statements identified as containing misinformation. Furthermore, Osman et al. (2022) have called for additional research to determine which category of misinformation— "no factual basis," "uncertain factual basis," or "exaggerated factual information"— is most susceptible to misinformation. The analysis conducted in this study shed light on the prevalence of the "uncertain factual basis" category within the misinformation landscape. This category encompasses two distinct subtypes of misinformation: premature conclusions and truth

judgments. Consequently, these findings underscore the significant presence of misinformation originating from sources with uncertain credibility.

Misinformation poses a significant challenge to effective public sector communication as it erodes people's trust in institutions and organizations, thereby jeopardizing the proper functioning of society as a whole (Lee, Moore, & Hancock, 2023). To develop a comprehensive understanding of the nature of misinformation in public sector and to adapt it into the context of public sector communication a co-occurrence analysis between themes and misinformation was conducted. The analysis contributed by showing that the highest percentage of misinformation was related to two themes COVID-19 and Public Organizations, which are both substantively closely related to the communication carried out by the authorities. Therefore, to gain and maintain citizens' unswerving trust in the public sector communication, it is essential to acknowledge the issue misinformation imposes on its credibility (Lee et al., 2023) and steer the corrective efforts to strengthen the trust between society and its citizen. The findings of the co-occurrence analysis in this study support the view that effective public sector communication can play a significant role in countering the dissemination of misinformation and thus support citizens' well-being, whereas ineffective communication may have the opposite effect.

### **6.3 Managerial implications**

Countering misinformation is a serious challenge for public sector organizations, as indicated by the prevalence of misinformation in communication between society and citizens revealed in this study. To effectively combat misinformation, it is imperative not only to comprehend the phenomenon itself but also to gain a precise understanding of how it impacts different areas of public sector communication.

Drawing upon the findings of this research, an assessment of the harmfulness of misinformation (Figure 16) was developed. While the assessment is limited to this particular case and context, it offers valuable insights for public sector organizations. Based on these insights, it is advisable to prioritize initiatives that bolster democracy and trust, as these dimensions appear to be particularly vulnerable to the adverse effects of misinformation. By proactively strengthening these aspects, public sector organizations can fortify their resilience against misinformation and mitigate its potential consequences.

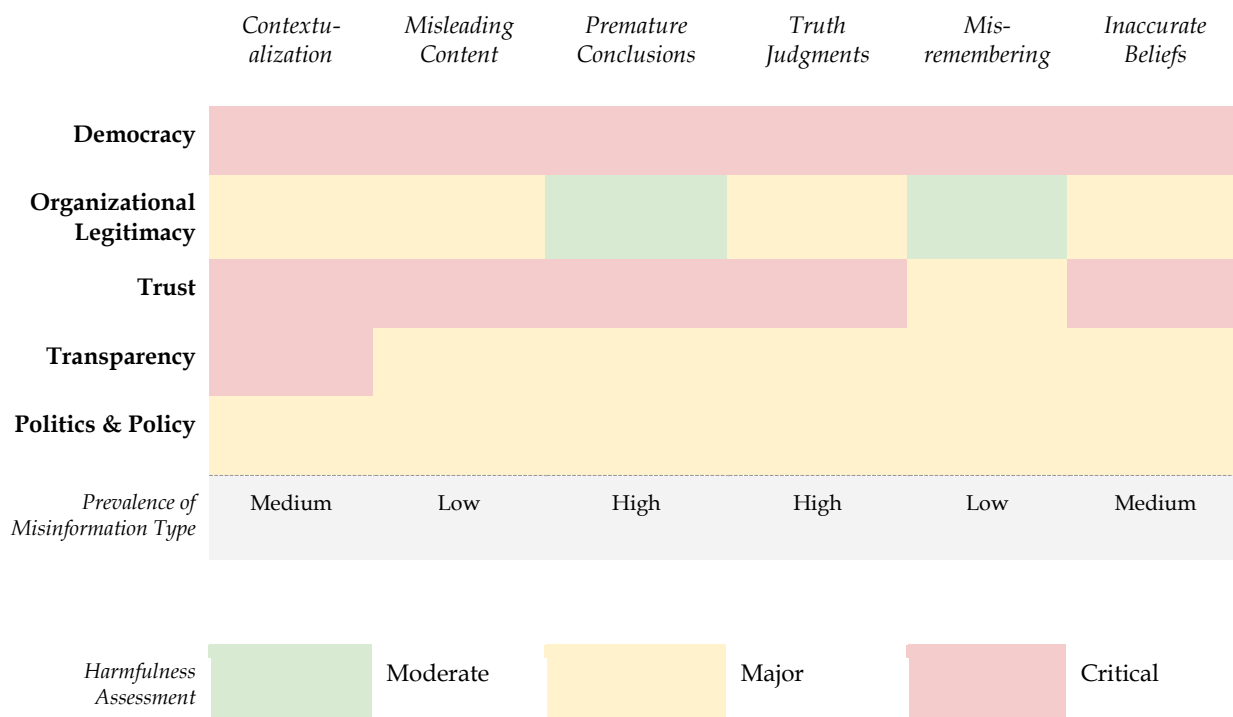


FIGURE 16. Harmfulness assessment of misinformation in public sector communication.

Based on the findings, this research also makes some additional practical recommendations for public sector organizations, managers, and communication professionals. First, the study's identification of misinformation predominantly classified under the "uncertain factual basis" category highlights the possibility that a significant number of citizens lack sufficient information to formulate informed opinions or submit accurate citizen statements. The significance of the public sector's responsibility in providing accurate and transparent information to citizens cannot be overstated. With the increasing prevalence of information disorder, this task has become even more crucial.

Secondly, the thematic analysis of citizens' statements revealed that despite the prevalence of misinformation, many statements reflected genuine concerns about the erosion of democracy, information security and privacy, and the violation of basic rights. This underscores the importance of public sector organizations prioritizing the enhancement of their deliberative processes. In doing so, they can create an environment where citizens feel heard and valued and have a meaningful chance to engage in dialogue and decision-making. Platforms such as *lausuntopalvelu.fi* play a crucial role in facilitating deliberation and soliciting feedback from citizens. However, it is equally vital to ensure that these views are genuinely considered in the development of legislation and public services.

Thirdly, this study suggests that citizens' previous experiences with the communication activities of the authorities have an impact on the spread of

misinformation. While combating misinformation is undoubtedly a challenging task, public sector organizations possess a unique opportunity to significantly contribute to the fight against information disorder through their communication strategies and activities.

## **6.4 Evaluation of the study and suggestions for future research**

### **6.4.1 Trustworthiness and limitations**

The trustworthiness of qualitative research is traditionally evaluated taking into account the following set of criteria: credibility, dependability, confirmability, and transferability (Denzin & Lincoln, 2017). As credibility ensures that the findings of the research are considered reliable and trustworthy, dependability assures that the same findings could be accomplished in similar conditions. Confirmability, on the other hand, refers to the fact that a clear link or relationship between the results and the data can be found in the research. Finally, transferability indicates how the research findings may or may not be transferred to another context. (Stenfors et al., 2020.) When analyzing the trustworthiness of research, credibility is a necessary metric to evaluate. Credibility insists that the chosen research method be explained and justified as the most applicable method for the research (Stenfors et al., 2020). Hybrid thematic analysis can be argued to be best suited for this study, as the purpose was to understand the research object in its natural context and at the same time to understand how the theoretically approached phenomenon (misinformation) manifests itself in the research data. To ensure credibility in qualitative research, it is common to use triangulation. Triangulation refers to the utilization of multiple methods or data sources to advance an integrated understanding of the studied phenomenon (Patton, 1999). As the chosen research method in this study is hybrid thematic analysis, theory triangulation and investigator triangulation were utilized. Theory triangulation utilizes different theories while interpreting and analyzing the chosen data (Carter et al., 2014). In this study, the data was analyzed both deductively and inductively, and both methods were approached from different theoretical backgrounds. Investigator triangulation includes the involvement of multiple researchers to diversify the observations and confirm the findings (Carter et al., 2014). This makes the observations more credible as it reduces the interpretive bias of researchers (Patton, 1999).

In addition to strengthening the credibility of the research, having two independent coders also reinforces its dependability. The dependability of research means that the findings done in the research are transferable to other similar circumstances, and the study findings could be achieved by different researchers by replicating the research (Stenfors et al., 2020). The dependability of the research was ensured with an inter-coder agreement. When interpreting the data in qualitative research, it is essential to maintain some sort of structure to avoid bias and misinterpretation of the data (Drisko, 2013). A proper inter-



coder agreement percent indicates that if multiple coders agree in the coding process, the interpretations do not contain unsystematic or distorting variations (Bayerl & Paul, 2011). Throughout this research, intercoder agreement (ICA) analysis was conducted at three distinct stages, consistently achieving results that exceeded the accepted threshold of 80% (Bayerl & Paul, 2011). The first ICA analysis was performed prior to accepting the inductive codes, resulting in an agreement of 84.6%. The second analysis took place midway through the coding process of the entire data set, achieving an agreement of 88.3%. Finally, the third analysis was conducted after coding all statements, producing an agreement of 86.7%. Based on the results of the ICA-analysis, it can be stated that the research maintained its dependability throughout the analyzing process.

Furthermore, confirmability can be strengthened in the research by being as transparent as possible about how the findings were made with the help of accurate descriptions and quotations (Stenfors et al., 2020). In this study, confirmability was strengthened by preparing the codebook as accurately as possible and by reporting the research process in detail. Quotations were presented extensively in connection with the research results, and the inductive and deductive identification of themes from quotations was described with vivid examples.

Finally, to achieve transferability in qualitative research, it is essential that the context of the study and its possible impact on the findings are clearly described (Stenfors et al., 2020). Maxwell and Chmiel (2014) point out that transferability does not involve the requirement to find general conditions to which research results or a new theory could be applied, but rather involves the effort to transfer the new understanding created by the research into a new situation. Although by choosing to focus on a single case, transferability in this study could potentially be weakened, the context of the study and the background of the case are clearly described in connection with the research methods. Thus, this study offers a good opportunity to transfer the findings further to other contexts and cases and to explore whether the results are congruent or different.

In addition to the classic evaluation criteria presented above, the newer qualitative research quality assessment standards also include research *reflexivity*, which refers to a continuous process in which the position of the researcher and the context of the research are examined and articulated (Stenfors et al., 2020; Barrett et al., 2020). Hence, for qualitative research to be of high quality and its findings to be authentic, it is a prerequisite that the researcher's position and assumptions as well as the possible biases are presented transparently (Reid et al., 2018). This is significant so that the researchers may become aware of their own power in relation to the research object and understand how their possible ideological assumptions and worldview affect the research process (O'Leary, 2013). In this study, the researchers were two Finnish women, for whom the context of the study was therefore culturally close. In addition, the research data was mostly available in the researchers' native language Finnish (except for a few statements, which were in Swedish), which

increased the possibility of understanding the meanings of the statements also on a nuanced level. The researchers' experience of living in a Finnish democratic society influenced the choice of the research object and data, as well as the assumption of deliberative democracy as an aspirational social state. At the same time, it is important to point out that as Finnish citizens, the reform of digital identity and the proposed legislation would also affect researchers, which strengthens the importance of personal experience in the research process.

The three most identified researcher biases are sampling bias, research design bias and anticipation bias, of which the latter refers to the influence of prior expectations on the research process (Morse, 2015). Since the researchers did not make separate selections regarding the participants, but all citizens who had submitted a statement via the online service were selected as the research subject and the response time was not limited, sampling bias was probably not strong in this study. Furthermore, research design bias is often unconsciously part of qualitative research, and its influence cannot therefore be completely avoided (Morse, 2015). In order to minimize this effect, in this study, the aim was to prepare the research questions and the entire research implementation as free as possible from the researchers' own assumptions. Nevertheless, anticipation bias has potentially affected the research results in such a way that researchers have been unintentionally influenced by their previous experiences, expectations and thoughts when preparing the codebook and interpreting the results. However, the effect of anticipation bias was strived to be reduced by using two independent coders and by constant critical discussion peer-reviewing among the researchers during the interpretation and writing of the results.

There are some additional limitations identified for the presented study. The research conducted was a singular case study that examined the phenomenon of misinformation through one case. The drawn conclusions are valid for the case of the legislation of digital identity in Finland, but the generalization of the findings to a broader context requires additional research. Future research around the findings should be conducted to reinforce the results of this study and verify if the same results recur in different contexts. Another limitation of the study is that it relied heavily on the interpretation of the researchers. The analyzing process of the statements as well as the interpreting of the results was a challenging and ambiguous process that was based on the interpretation of researchers. Additionally, although a structural process was established by the researchers to identify misinformation in the statements, it is possible that some false information was left undetected. Similarly, human errors in the coding process are possible. Furthermore, the analyzed statements were categorized into one misinformation type at a time, according to the misinformation type best descriptive of the statement. In reality, the phenomenon is more complex than this, and the types of misinformation often appear simultaneously or are intertwined. Finally, the harmfulness assessment presented in the study rests upon the conducted thematic analysis and the results of the co-occurrence analysis. Causal relations were difficult to point out, and

therefore the introduced assessment is indicative and requires more investigation before generalization to a broader context.

#### **6.4.2 Future research suggestions**

While this study has successfully provided valuable insights into the phenomenon of misinformation within the context of public sector communication, further research is required. Building upon the categorization of misinformation developed in this study, future investigations could explore how misinformation manifests in other public sector contexts and cases. Furthermore, additional research is needed to determine the types of misinformation that pose the greatest harm to public sector organizations: is it misinformation characterized by a high degree of factual inaccuracy, such as "inaccurate beliefs," or is it the more prevalent forms of misinformation, such as "premature conclusions"? Although this study reveals that misinformation of the "uncertain factual basis" type is widespread, further research is required to verify this observation and to gain a deeper understanding of the underlying mechanisms driving its dissemination.

Moreover, future research could aim to examine in greater detail how misinformation impacts the specific characteristics of public sector communication and identify the key factors that contribute to misinformation resilience. Understanding the nuanced effects of misinformation on public sector communication dynamics is crucial for developing targeted strategies to mitigate its influence effectively.

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## APPENDICES

APPENDIX 1. Themes with their numerical and percentage occurrences.

Themes	Examples	n	%
<i>Resistance to Change</i>	Reluctance or opposition to changing conditions or new ways of doing things, general negative expectations towards the digital identity project or targeted to digital transformation	451	91.85%
<i>Democracy at Stake</i>	Weakening of democracy, distrust of authorities or citizens, governmental non-transparency and secrecy, rising social inequality and digital discrimination, laws and rights, Chinese social credit system	379	77.19%
<i>Control &amp; Lack of Freedom</i>	Restriction of individual freedom in various ways, including monitoring and control, restrictions and punishments, lack of self-determination and the growing power of authorities, human microchip implants, Chinese social credit system	368	74.95%
<i>Data &amp; Technology Risks</i>	Technological implementation of digital identity, uncertainty and unreliability of technologies, dependency on technologies, attaching other data to the digital id	289	58.86%
<i>Public Organizations</i>	Finnish government, EU, World Economic Forum (WEF)	132	26.88%
<i>COVID-19</i>	Vaccinations, corona passport, COVID-19 pandemic	110	22.40%
<i>Public Finance</i>	Price or costs of the project, use of government revenue in an unpleasant way	103	20.98%
<i>Total</i>		1832	

The total number of statements, which is also the unit of analysis used in the study, was 491. In the same statement, several themes often appeared simultaneously.

APPENDIX 2. Misinformation types with their numerical and percentage frequencies.

Type of misinformation	n	%
No misinformation detected	161	33%
<i>Contextualization</i>	18	4%
<i>Misleading content</i>	11	2%
<i>Premature conclusions</i>	177	36%
<i>Truth judgments</i>	83	17%
<i>Misremembering</i>	6	1%
<i>Inaccurate beliefs</i>	35	7%
<b>Total</b>	<b>491</b>	<b>100%</b>

APPENDIX 3. The frequency of themes in the research material and their co-occurrence with misinformation

	No misinfo.	Contextualization	Misleading content	Premature conclusions	Truth judgement	Misremembering	Inaccurate beliefs	Misinfo. total
<i>Resistance to Change</i> (n=451)	145 (32,2%)	16 (3,5%)	9 (2,0%)	166 (36,8%)	79 (17,5%)	5 (1,1%)	31 (6,9%)	306 (67,8%)
<i>Democracy at Stake</i> (n=379)	60 (15,8%)	18 (4,7%)	11 (2,9%)	170 (44,9%)	80 (21,1%)	6 (1,6%)	34 (9,0%)	319 (84,2%)
<i>Control &amp; Lack of Freedom</i> (n=368)	64 (17,4%)	17 (4,6%)	10 (2,7%)	161 (43,8%)	79 (21,5%)	5 (1,4%)	32 (8,7%)	304 (82,6%)
<i>Data &amp; Technology Risks</i> (n=289)	49 (17,0%)	15 (5,2%)	10 (3,5%)	113 (39,1%)	73 (25,3%)	5 (1,7%)	24 (8,3%)	240 (83,0%)
<i>Public Organizations</i> (n=132)	12 (9,1%)	16 (12,1%)	6 (4,5%)	40 (30,3%)	41 (31,1%)	2 (1,5%)	15 (11,4%)	120 (90,9%)
<i>Public Finance</i> (n=103)	21 (20,4%)	6 (5,8%)	2 (1,9%)	38 (36,9%)	21 (20,4%)	3 (2,9%)	12 (11,7%)	82 (79,6%)
<i>COVID-19</i> (n=110)	4 (3,6%)	10 (9,1%)	6 (5,5%)	16 (14,5%)	57 (51,8%)	2 (1,8%)	15 (13,6%)	106 (96,4%)

APPENDIX 4. Public sector communication characteristics and their numerical and percentage co-occurrence with misinformation types.

	Context. (n=18)	%-value of the N	Misle ading cont. (n=11)	%	Prem. concl. (n=177)	%	Truth judg. (n=83)	%	Misr eme m. (n=8)	%	Inacc. bel. (n=35)	%
<i>Democracy</i>	18	100%	11	100%	170	96%	80	96%	6	100%	34	97%
<i>Organizational Legitimacy</i>	10,67	59%	5,67	52%	73,33	41%	52,33	63%	3,33	42%	19,33	55%
<i>Trust</i>	16,5	92%	10	91%	152,5	86,16%	77,75	94%	5,25	66%	30,25	86,43%
<i>Transparency</i>	17	94%	8,5	77%	105	59%	60,5	73%	4	50%	24,5	70%
<i>Politics &amp; Policy</i>	12	67%	6,5	59,01 %	104	58,76%	50,5	61%	4,5	56%	23	66%

The percentage values were analyzed as follows: moderate < 50%, major 51-80%, critical 81-100%

APPENDIX 5. The codebook for citizen statements.

## Coding Book Manual

### *General instructions*

- This codebook's purpose is to provide guidance on how to code citizen statements regarding the digital identity legislation using the Atlas.ti software.
- Specifically, the codebook is designed to identify potential instances of misinformation contained within the statements, as well as the topics that citizens associate with these statements.
- **The unit of analysis** in this codebook is each individual citizen statement submitted to lausuntopalvelu.fi, regardless of its length. It is worth noting that some of the statements may be lengthy, while others may consist of only a few words.
- This codebook is divided into two parts. The first part focuses on possible instances of misinformation in citizen statements and employs a deductive coding approach. Coding sheet A provides a list of predefined codes along with illustrative examples. In the second part of the codebook, the emphasis is on identifying topics that citizens associate with their statements, using an inductive coding approach.

The codes for the data-driven approach are presented in Coding Sheet B.

- The coding process commences by carefully reading through each statement, after which the identification and coding of misinformation (sheet A) take precedence, followed by the coding of topics (sheet B). During the coding process, the statement is thoroughly reviewed multiple times as needed to ensure accuracy and consistency.

#### *Coding sheet A*

- In the process of coding potential misinformation, **the most important rule to follow is that each statement should be classified to only one type of misinformation**, the one that most accurately characterizes the statement. The process for identifying potential misinformation (presented also in Figure 8) involves several steps.
- Firstly, the statement is read carefully to gain a comprehensive understanding of its contents.
- Next, the presentation and expression of the statement are evaluated.
- Then, the contents of the statement are reflected against generally trusted knowledge and beliefs. Industry reports, scientific journals, policy briefs, and search engines are utilized to verify the contents and sources of the statement.
- Finally, the statement is labeled and placed in the appropriate category based on the outcome of the verification process.
- If the statement doesn't contain any misinformation, it should be classified under the category "No misinformation detected".

#### *Coding sheet B*

- In the process of coding topics related to statements, **it's important to note that each statement can be classified under multiple codes**.
- Coding sheet B is used to facilitate this process, presenting various topics and related codes, along with examples that may guide the coding process.

### **Coding sheet A: Misinformation**

#### Misinformation Coding Sheet

Code	Definition	Description	Example Quotation
<i>1A Inaccurate beliefs</i>	Information considered incorrect based on the best available evidence from	The central argument is that information that is completely	"I oppose the usage of digital identity as a way to diminish people's freedom and a tool of control. We were born to be free in this

	relevant experts at the time. (Vraga & Bode, 2020)	against the general belief can be labeled as inaccurate.	world and the current identity verification systems are enough. Identification with internet banking personal codes and passports are secure enough for this. In pursuance of the COVID-19 vaccination, each vaccinated person got a microchip that is visible with Bluetooth Le scanner - software. The MAC addresses of the microchips are different for every person! This "chipping" of citizens is illegal and a human rights violation globally."
<b>2A Misremembering</b>	Another cause of misinformation occurs in instances where the individual has been exposed to accurate information via external sources such as news, but biases in their memories lead to misremembering the information (Coronel, Poulsen & Sweitzer, 2020)	The central argument is that misremembering information furthers misinformation.	"It is impossible to formulate digital identity for a person that does not have a smartphone (30% of the population)."
<b>3A Premature conclusions</b>	Misinformation can be the product of disseminating available data influenced by implicit biases, premature conclusions drawn from incomplete investigations, or a lack of diligence to remain current with contemporary literature and commitment to life-long learning. (Fry, 2023)	The central argument is that people make hasty conclusions without the necessary information.	"There is no need for digital identity. It is possible that private information will be added there and that someone is going to supervise it. If you disagree on things, your bank accounts will shut down and you will lose your job. This violates the non-discrimination act as well as the constitution. This is solely a tool for rule and control."
<b>4A Truth judgements</b>	In order to truly internalize new information, individuals need to make coherent associations between prior knowledge and the information they encounter. Truth judgments are conceptions about the truthfulness of a statement (Chaxel, 2022).	The central argument is that prior knowledge affects the process of receiving additional/new information.	"No. We need to think about this and consider that soon all of our private information including health information can be hacked in the blink of an eye. And what about when you decide to combine vaccines and medication you want us to use to this digital identity? Does the Digital ID shut down when I want to decide myself what to do with my body? I will never ask my clients for any kinds of passports. Not COVID, vaccine or digital id passports."
<b>5A Misleading content</b>	Information that is factually based, but there are rather misinformation components that are included in the information that make it fabricated and present it in a way that is misleading. (Osman et al., 2022)	The central argument is that the contents of the information are presented in a misleading way.	"There have been huge mishaps in the legislation of digital identity and questionable secrecy from Finnish citizens. Majority of citizens are participating in the development of a new digital identity system with seven other countries without knowing. Digital Identity Working Group = the DIWG-committee has prepared questionable principles for developing the digital identity system and the infrastructure behind it."

<b>6A Contextualization</b>	Content that is genuine but has been reframed in dangerous ways (Wardle, 2019)	The central argument is that statistics or other factual sources of information are being used out of contexts which may lead to misinformation.	“An absolute no. I do not accept this. A freedom to choose needs to be preserved. According to the 7§ of the constitution each person has the right for life, personal freedom, sanctity and safety. Digital ID is against this law.”
<b>7A No misinformation detected</b>			

## Coding sheet B: Statement Topics

### Statement Topic Coding Sheet

Code	Covered Topics	Example Quotation
<b>1B Resistance to change</b>	Resistance to digital identity or proposed legislation, or resistance to change in relation to digitization	“An absolute NO to digital passports and all monitoring. I will not give my consent to the use of my data in digital applications. Banknotes must be preserved.”
<b>2B Distrust of citizens</b>	Distrust towards citizens	“It seems that ordinary, honest citizens are already automatically "suspected" by reducing, for example, the period of validity of the identity card.”
<b>3B Distrusts of authorities</b>	Distrust towards authorities or the digital identity project	“I don't consider this reliable, or safe. I see this as a technology that destroys democracy and discriminates against citizens, as well as a means of control.”
<b>4B Weakening of democracy</b>	Dictatorship, anarchy, communism, totalitarianism, civil war, Nazism, polarization, Chinese system, slavery, general weakening or threat of the democratic system	“If such a system is introduced, society will be split into two, where those who live outside the system will be subjugated out of society. This creates a class of outlaws who will fight such a totalitarian system to the death. With this plan, you are creating a civil war and causing suffering and destruction to our country.”
<b>5B Nontransparency and secrecy</b>	Secrecy, lack of transparency, obscure project, masking or covering up control, corruption	“You have also prepared the matter in complete silence. Why don't you publicly inform about these issues? The mainstream media does not inform about these either. Something like this has so much impact that it definitely deserves a wide open debate, if not a referendum. But when there is something obscure about the matter, all the information is hidden and

		silenced, just like the discussion about vaccine disadvantages."
<b>6B Legislation</b>	Violation of laws such as the constitution, illegality of the project	"As for the authorities, I do not accept this proposed system here either. It is not reliable, and certainly according to the Finnish constitution, no one other than the doctor or nurse of your health center needs to see your own health information. No law "walks" over the constitution, so this development should be stopped now."
<b>7B Rights</b>	Fundamental and human rights	"How to ensure individual rights and secure confidentiality? How will freedom of speech be secured, where human rights, such as freedom of movement and work, are placed under such a passport?"
<b>8B Inequality / exclusion</b>	Minority rights, exclusion of groups, inequality, challenges faced by the elderly	"Equality has not been taken into account. People cannot be forced against their will to use a device in order to participate and be an active member of society. For special groups, digital tools can otherwise be insurmountably difficult to use. Not everyone even owns digital devices."
<b>9B Costs / taxation</b>	The price, costs, expensiveness of the project or the waste or misuse of tax money	"The digital identity card will incur unreasonably high implementation costs and annual maintenance costs for the state. Its advantages and benefits are not commensurate with the risks, harms and costs to taxpayers."
<b>10B COVID-19</b>	COVID-19 pandemic, vaccinations, corona passport	"A terrible example has been the corona passport, which is the precursor of this digital identity. The COVID-19 passport is a discriminatory tool that should not be used in any democratic state. The COVID-19 passport has been a complete flop in terms of human rights, fundamental rights and the constitution."
<b>11B Uncertainty of technologies</b>	Uncertainty, unreliability of technology or the network, dependence on technology or the network (e.g. the obligation to purchase a smartphone)	"If there is an attack on the network, there is no access to the internet, the technology does not work for some reason, then the digital identity cannot be used, as it works over the network."
<b>12B Data security risks / hacking</b>	GDPR, hacking, privacy protection, misuse of personal data, identity theft, the Vastaamo leak, selling or forwarding information to third parties	"Digital identity is associated with data security risks - if all citizens' data is stored in one place, it is an attractive target for hackers."
<b>13B Connecting other data to digital identity</b>	Connecting other information such as health information, bank information or payment traffic to digital identity	"If all the information about every citizen is behind a single QR code, how can we guarantee data security? In addition, the digital wallet and the central bank's digital currency can be programmed. How to prevent abuses also by the authorities?"



<b>14B EU</b>	European Union	“As a citizen, I state that the digi-ID law is a citizen's eID control tool sent by the EU to its member states, and it does not promote the citizen's legal protection in services that require identification as presented. The goals and solution models of the proposal sound great, but the law also contains a great danger that the data collected in the digital ID application that identify and connect the identity of the citizen will give the EU and its member states a free hand to control their citizens and use the digi-ID for social as a means of scoring.”
<b>15B Government</b>	Current or future governments in Finland	“If this ends up in the hands of a stranger, a person loses everything related to himself, and the damage can hardly be repaired. In addition, this opens up the possibility of digital and also physical "deletion" of a person for future governments - we cannot know what form of government we will have in a few decades.”
<b>16B WEF</b>	World Economic Forum	“Every citizen who is even slightly enlightened understands that this is a global agenda driven by the WEF, which Finnish politicians are supporting with this project.”
<b>17B Microchips</b>	Microchipping of people, connecting chips to digital id	“People are being followed too much and it violates individual freedom. Leads to microchipping of people, which is very worrying.”
<b>16B Restrictions and penalties</b>	Restrictions regarding movement, work, health or other ordinary life, penalties for disobedience	“I believe that with this change, they want to limit basic human rights and benefits. For example, an unvaccinated person can still have her/his income taken away as a punishment for disobedience.”
<b>17B Growing power of authorities</b>	Growing power of authorities or elites	“The authorities would get too much power. In the worst case, a person's movement would be restricted and bank accounts would be closed if the person does not behave the way the authorities want.”
<b>18B Monitoring and control</b>	Control society, surveillance society, increase in monitoring and control	“We oppose this kind of centralization of power and the emergence of a control society both in Finland and in the European Union.”
<b>19B Lack of freedom and self-determination</b>	Individual freedom, self-determination, the weakening of freedom in Finnish society	“I am absolutely against the digital Id passport, which is the way to total control societies. People must have the freedom to be, travel and go without digital control from society.”
<b>20B Social credit system / Chinese society</b>	Chinese social system, social credit system or tracking, measuring and evaluating citizens	“The possibilities of using a digital identity card are very similar to the social credit system of the Chinese dictatorship, where the rights of citizens to participate in society and to realize the basic conditions of life can be arbitrarily

regulated and limited by the government on any basis related to social status, consumption behavior, health, conviction, opinion, etc.”