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Trust, Democratic Resilience, and the Infodemic

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Facing up to the Infodemic: Promoting a Fact-Based Public Discourse in Times of Crisis

Policy Paper Series by the Israel Public Policy Institute (IPPI)

Trust, Democratic Resilience, and the Infodemic

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About this Paper

This policy paper is part of the paper series *"Facing up to the Infodemic: Promoting a Fact-Based Public Discourse in Times of Crisis."*

Against the backdrop of the COVID-19 crisis, this paper series explores some of the key challenges facing democratic societies as a result of misinformation in the digital public sphere. It features a unique mosaic of perspectives and insights by experts from Israel and Germany that shed light on different facets of the phenomenon of online misinformation, with the aim of invigorating a societal debate on the issue as well as offering concrete ideas about how to address it.

The series *"Facing up to the Infodemic: Promoting a Fact-Based Public Discourse in Times of Crisis"* was generously supported by the German Embassy in Tel Aviv. The content and opinions expressed in the papers are solely of the authors and do not necessarily reflect the views of the German government and/or the Israel Public Policy Institute.

About the Project

This paper series is part of the broader project *"Fostering Democratic Resilience in the Digital Age,"* conceptualized and executed by the Israel Public Policy Institute (IPPI) in collaboration with the Heinrich Böll Foundation, Tel Aviv.

The objective of the project is to promote dialogue, exchange of knowledge and collaboration between researchers and practitioners from Israel and abroad to enhance democratic resilience in the context of the changing media and information landscape in the digital age.

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Executive Summary

"Often, not until times of crisis do we realize how fragile trust relations are." [1]

This policy paper focuses on the nexus between trust and mis- and disinformation in the context of the COVID-19 pandemic. First, we use the image of a spiral to illustrate selected predictors of distrust at the macro-level of societal institutions (particularly democratic institutions and the media), the meso-level of intergroup relations, and the micro-level of individuals' generalized distrust towards power, what might be referred to as the conspiracy mentality.

At each level, this paper reviews evidence for the state of (mis-) trust before the pandemic and how declining levels of trust increase vulnerability to mis- and disinformation and/or conspiracy narratives, and show how "polluted information"[2] can reinforce distrust in the sense of a downward spiral. Building on this framework, the paper then moves on to discuss how COVID-19 has impacted the interplay between trust and polluted information across the three levels and demonstrates how increased distrust has endangered successful pandemic-control and stability. Finally, the paper deduces starting points to prevent the downward spiral of disinformation and foster societal resilience at all three levels.[3]

To promote societal resilience to mis- and disinformation, six key-challenges need to be addressed:

1. Social media architecture and business models constitute a venue of unprecedented power for spreading conspiracy narratives, mis-, and disinformation: publishing and amplifying content is easy, and users may consume and share social media posts without careful analyzing the information they encounter.

2. Polarization, inequality, and misbehavior by political actors and media representatives are associated with declining trust in democratic institutions and the media around the world. Such developments can increase citizens' likelihood to turn towards alternative news sources and become more vulnerable to mis- and disinformation and conspiracy narratives.

3. Ongoing intergroup conflicts and discrimination can lead to intergroup distrust over time, increasing citizens' susceptibility to 'polluted' information. As a result, mis-or disinformation and conspiracy stories can contribute to violence and radicalization processes.

4. Basic human cognition and need for a coherent understanding of socio-political developments, subjective certainty, and a positive image of oneself and ones ingroup make people susceptible to conspiracy stories. A large share of citizens is likely to believe in conspiracy stories from time to time, which can increase tolerance for and even the embracing of violent behavior.

5. Mis- and disinformation and particularly conspiracy stories often attribute blame to democratic institutions and outgroups for existing problems in a society, fueling even more distrust among the public, and thus contributing to a downward spiral of distrust and deception.

6. The COVID-19 pandemic has reinforced existing distrust and led to a global flood of mis- and disinformation and conspiracy stories that are likely to accelerate the downward spiral of distrust.

Thus, there is a need to promote a multi-sector effort that involves the government, civil society, the media, and the policy and science communities, and which addresses the information disorder in a coordinated fashion at three levels:

- **Democratic institutions:** Policymakers must address the fertile ground of inequality and polarization on which misinformation flourishes, but also themselves act in a trustworthy manner (i.e., benevolently and competently) and handle information responsibly. For instance, politicians must refrain from using misleading information in their own campaigns. Politicians must also provide the boundary conditions for trustworthy journalism and issue policies that promote responsible information handling (e.g., obligating platforms to take such measures or setting up news literacy programs). This level also includes legacy media, which must act responsibly and ensure their trustworthy reputation through factual, critical, and transparent reporting. Only if legacy media are generally considered trustworthy, they can successfully correct false information. When publishing such a correction, legacy media should carefully weigh the need to inform against the risk to provide the "oxygen of amplification"[4] to anti-democratic actors.
- **Intergroup level:** Fighting prejudice between different social groups is necessary to overcome widespread distrust among future generations. Enabling positive contact and an overarching shared identity are promising approaches at this level. Politics and the media both play a crucial role for providing the boundary conditions for such a cooperative environment.
- **Individual level:** Citizens must be educated to evaluate and treat the information they encounter. This requires the ability to identify trustworthy information, awareness that some information is disinformation, reflecting about ones' own role in the infodemic, i.e., knowing that the dissemination of information can have far-reaching consequences, and finally, being empowered to check information encountered online.[5] At the same time, it is also necessary to create conditions in which citizens can feel safe and respected in their social group to reduce vulnerability to deception.

1. Introduction

Trust is a complex concept. In everyday life, trust is often associated with positive expectations, such as self-confidence in one's ability to overcome challenges, placing confidence in others, or a general trust that one's future does not hold unthinkable misfortune. Scientific definitions of trust vary across authors and academic fields, but trust is broadly understood as a situation in which a truster takes the risk to trust a trustee. This trustee can be an object (e.g., a medication), a person such as a doctor, or politician; a social group, such as the voters of an opposing political party; a specific organization such as the New York Times, an institution such as the government; or an entire societal system such as the legacy media, science, or democracy. Different levels of trust can thus be categorized in a range from the largest macro-level of trust in societal systems, over the meso-level of intergroup trust, down to the smallest micro-level of trusting another individual.[6]

> **Trust closes the information gap and allows for actions under conditions of uncertainty, thereby reducing daily life's complexity to a manageable level.**

Trust is always accompanied by a certain risk due to a lack of knowledge. If the truster knows exactly what a trustee will do, he or she does not need to invest trust.[7] Trust closes the information gap and allows for actions under conditions of uncertainty, thereby reducing daily life's complexity to a manageable level.[8] If, for instance, someone trusts the scientific process behind the development of a new drug, the government that recommends it and the doctor who administers it, the risk of taking the medication appears small. If, however, that person has low trust and views the scientific process as faulty, the government as suspicious, or the doctor as dubious, taking the same medication would be perceived as riskier and the person would require additional information before proceeding.

Nowadays, such an information search is likely to take place online. Information found online has become a central part of peoples' media diet and in most countries news is increasingly consumed online.[9] In the early days of the COVID-19 pandemic, people, for instance in Germany, not only turned to established news channels such as public broadcasters or online newspapers, but also consumed more news via social media, YouTube, and instant messaging applications. Such online-platforms not only offer easier access to information, but fundamentally reshape the information eco-system thanks to their participatory nature. They have thus not only partially replaced traditional media channels, but also altered the public sphere itself, making it easy for anyone with Internet access, minimal skills, and an account to upload a YouTube video or write a Facebook post that might reach millions without being subject to editorial scrutiny. On the one hand, this new and seemingly decentralized information eco-system has created new opportunities for democratic participation while easing information flows. On the other hand, the "unedited public sphere"[10] has also provided a fertile ground for what has been dubbed the infodemic, i.e., a digitally inflated "overabundance of information – some accurate and some not"[11], including unintentional spread of misinformation and strategically conceived disinformation campaigns, which have flourished across the globe.[12]

How people respond to such mis- and disinformation varies greatly depending on their level of trust in the actors disseminating the information. Conspiracy stories, e.g., about Bill Gates implementing surveillance chips via the COVID-19 vaccine are more likely to be rejected if the institutions that are mandated to prevent such potential abuse are perceived as trustworthy. If, however, the same person perceives the media as a "lying press" that is likely to hide scandalous events, the conspiracy story comes to appear more plausible in his or her eyes. The lack of trust is thus not only likely to motivate the search for additional information, thereby increasing the likelihood of encountering mis- and disinformation,[13] but also affects how the "additional" information itself is perceived.

Whether people bestow trust upon a trustee depends on their prior experiences and their perceptions of the trustworthiness of the trustee. Five antecedents of trustworthiness perceptions can be distinguished: (1) The perceived benevolence of the trustees' motives; for instance, whether the government is perceived as acting for the good of the people. (2) Perceived integrity; for instance, whether a politician is perceived consistent and fair over time. (3) Perceived ability to accomplish the task at hand. For instance, whether a news article is able to provide the necessary information or a politician is perceived as being competent. (4) Perceived reputation of the trustee; for instance, whether quality media have a superior reputation for factual reporting compared to tabloid news. (5) Finally, trustworthiness is also often determined heuristically based on cues such as an experts' academic title, a newspaper's design, or the number of likes a given post has received.[14] Overall, maintaining and restoring trust is a continuous process, requiring competence, benevolence, and integrity over time. A reputation is more easily destroyed than built.[15]

2. Rationale

2.1. Defining Trust

Modern societies are complex and full of uncertainties. Citizens make decisions every day – buying a new smartphone, interacting with someone from a different societal subgroup, or voting for a certain political candidate – which are fraught with myriads of possible outcomes. To cope with the inherent uncertainty of the modern world and reduce everyday life's complexity to a bearable level, people need trust.[16]

Trust has been defined differently by different authors and in different academic fields. Psychological research tends to emphasize trust as an individual state, e.g., a person's propensity to trust unknown others, whereas sociological research emphasizes trust as a relationship between the one who trusts, the truster, and the object of trust, the trustee. Communication science combines these different approaches. Blöbaum[17] identified different key characteristics of this integrative concept, arguing that trust is a relationship based on a free decision (i.e., trust cannot be enforced), oriented towards the future (i.e., trust always relates to future behavior of the trustee) but rooted in both prior experiences of the truster (e.g., with a particular government) and his or her perceptions of the trustee's trustworthiness.

Different antecedents for this perception exist, namely the perceived (1) benevolence of the trustees motives (i.e., whether a politician acts for the good of the people); (2) the trustee's integrity (i.e., whether this politician is perceived as having a high justice orientation and acting consistently over time); (3) ability to competently undertake the task at hand (i.e., whether the health minister is competent in health-related questions); and (4) reputation (i.e., how the health minister is evaluated in society, how he has behaved in

the past, and so on). (5) Often trustworthiness is determined heuristically based on learned cues such as the academic title of a health-minister to signal expertise, or the typography of a newspaper signaling factual reporting ("fake news" that mimic journalistic news but do not adhere to journalist' standards of factual reporting capitalize on these cues).[18]

Perceived trustworthiness is always estimated: "Someone who knows all need not trust, someone who knows nothing cannot reasonably trust at all."[19] Consequently, trust always entails a risk which makes the truster vulnerable to the trustee's actions (e.g., the health minister's policies). Trust is therefore generally easier destroyed than built,[20] and restoring and maintaining trust requires benevolence, integrity, and competence over time to ensure a reputation of trustworthiness.

> **Although trust is an important prerequisite for the functioning of democracies, a healthy skepticism is necessary in order not to fall for false information just because it is spread by authorities.**

The trustee can be an object (e.g., a medication), a person (e.g., a politician), someone from a specific social group (e.g., a religious minority), as well as an organization, or institution (e.g., the World-Health Organization (WHO)), or an entire societal system (e.g., legacy media or democracy). Hence, as explained above, different trust levels can be distinguished,[21] ranging from the macro-level of trust in societal systems, to the meso-levels of trust in institutions, organizations, and social groups, to the micro-level of trust in another individual. This distinction matters, as trustors have different expectations with regards to the output of the trustee (e.g., a politician's performance), the relationship with people (e.g., with their doctor) or organizations (e.g., their insurance company) and the relationship with the system (e.g., how the political system reflects the 'will of the people'). The different levels of trust (e.g., trust in the legacy media and in democracy) are interwoven.[22]

Although trust is an important prerequisite for the functioning of democracies, a healthy skepticism is necessary in order not to fall for false information just because it is spread by authorities. Established legacy media can make factual mistakes, scientific papers are sometimes retracted due to erroneous reports and high authorities sometimes lie, as the example of former US President, Donald Trump, shows. Fact-checkers from the Washington Post who track his claims have noted over 26,500 false or misleading claims in the four years before he was voted out of office in November 2020.[23]

Nevertheless, like blind trust, blind distrust is not functional for a successful navigation of the complexity of modern society. Citizens will not benefit from the best information when they consider all news untrustworthy and thus refrain from considering new evidence in their everyday decisions. When information is evaluated primarily through the lens of polarized and distrustful intergroup relationships or even conspiracy ideations, fact-based discourse becomes impossible. Maintaining a societal discourse rooted in shared conceptualizations of realities depends on citizens from across the political spectrum being able to trust at least some information sources as factual.

2.2. Trust and the COVID-19 Crisis

Trust is particularly needed in times of crisis such as the COVID-19 pandemic. During crises, when uncertainty about the potential risks, measures, and consequences is high, multiple additional decisions must be made and, accordingly, people have a strong need for trustworthy information, trustworthy relationships, and a trustworthy political system.[24] This enhanced need was highly visible in the first year of the COVID-19 pandemic. The usual uncertainties accompanying any crisis were accelerated by the multiple open questions around the spread, consequences, and combating of the new corona virus and the long-term outcome of policy-decisions aimed at curbing the virus' toll.

> **The onslaught of information disseminated by "unedited" online-spheres such as social media offers great opportunities for participation. At the same time, it introduces new opportunity structures for manipulation.**

Furthermore, COVID-19 was the first pandemic to hit a digitized and networked society.[25] A multi-country survey by the Oxford Internet Institute showed that 39% to 78% of people across countries used social media for news consumption in the early weeks of the crisis and many of them named social media as one central gateway to misinformation during that time.[26] The onslaught of information disseminated by "unedited"[27] online-spheres such as social media offers great opportunities for participation. At the same time, it introduces new opportunity structures for manipulation. Early in the pandemic, the WHO declared an infodemic – an overabundance of information, some trustworthy, some not, that makes it hard for citizens to find the trustworthy information provided by legacy news media, fact-checkers as well as public organizations, such as national health authorities or the WHO.

In the next section, we will shed light on the nexus between trust, mis- and disinformation in the context of the COVID-19 pandemic. First, we use the image of a spiral of distrust to describe predictors of declining trust on the macro-level of societal institutions such as politics and legacy media, the meso-level of intergroup relationships, as well as the micro-level of an individuals' propensity to believe in conspiracy narratives. We then discuss how such a lack of trust is associated with the receptivity for mis- and disinformation or conspiracy stories which themselves can fuel even more distrust, and how this nexus played out during the first year of the COVID-19 crisis. From this we deduce countermeasures fostering societies' ability to resist and/or oppose the circulating infodemic and "bounce back" to their cognitive, emotional, or and behavioral state before the pandemic hit the world, i.e., measures fostering the resilience against the spiral of distrust.

3. Methodology and Questions

We based our arguments on a review of the social science research literature on trust, mis- and disinformation, conspiracy beliefs and countermeasures. While we focused mostly on peer-reviewed scientific articles and scientific books, in the context of the COVID-19 crisis, we note that new evidence has often been generated in rapid response and is often not formally peer-reviewed. In addition, data from renowned polling institutes was also considered; our descriptions of socio-political events (such as time points of curfews) rely on legacy news sources. The literature

database used in the writing of this paper focuses on Western, democratic, industrialized societies in European countries or the US, although we try to highlight findings from across the globe. If available, meta-analyses and review articles were treated preferably as they allow for an overview about the state of a research field, providing a broader perspective than a single article.

In the following pages, this paper sets out to answer the following questions:

- What are the predictors of declining trust in societal institutions, social groups, or conspiracy mentality?
- What was the state of trust before the pandemic?
- How is trust related to the susceptibility for mis- and disinformation or conspiracy stories?
- How did COVID-19 change the state of trust and how was this related to pandemic control and societal peace?
- What potential countermeasures can be deduced?

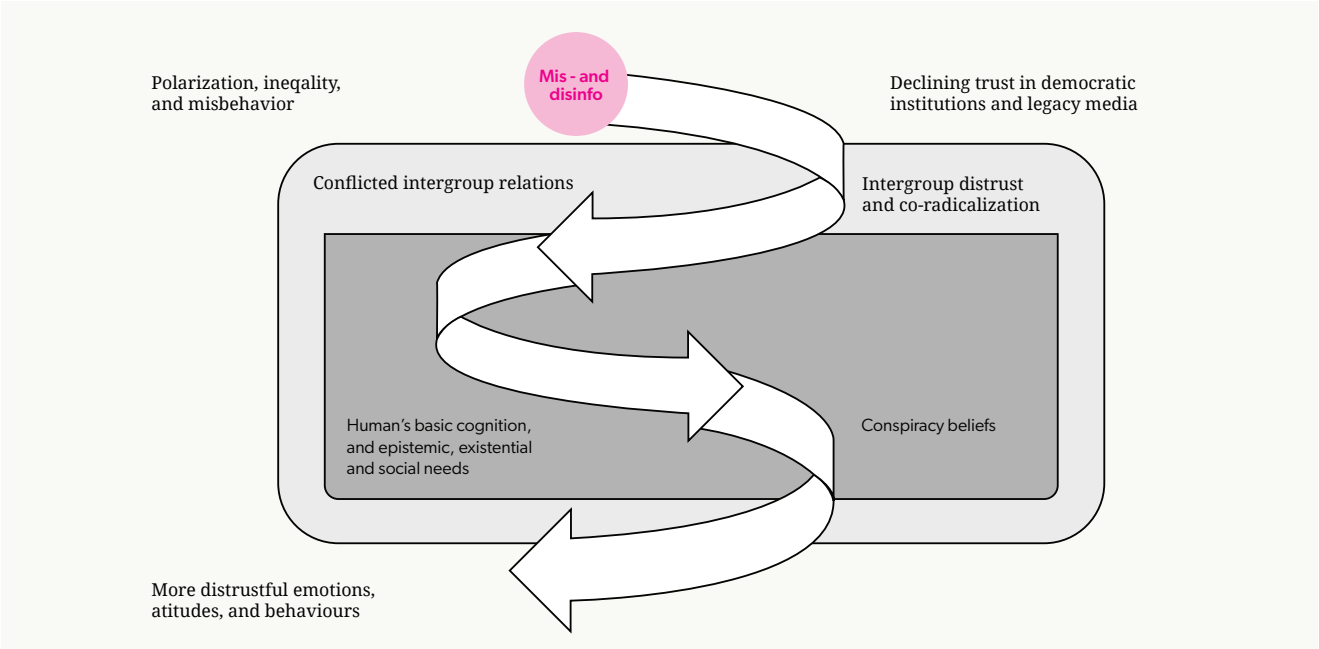
4. The Spiral of Distrust

The intersection of distrust and mis- and disinformation can be examined on different, interwoven levels. In this paper we explore the aforementioned questions at three central levels: The societal level of (democratic) state institutions and the legacy media, the intergroup level in which societal sub-groups meet each other, and the individual's susceptibility to distrustful and conspiracy ideation promoting stories. The intersection of distrust and mis- and disinformation at these three levels could exacerbate one another, thus contributing to a downward spiral of distrust.[28]

Figure 1 illustrates the underlying idea. Starting on the upper-left panel, our literature research provides evidence that polarization, inequality, and misbehavior by politicians and media representatives can contribute to declining trust in institutions and the media (upper left-corner), allowing disinformation to thrive. At the next level, conflicted and distrustful intergroup

Figure 1.

Visualization of the Interplay Between Predictors for Distrust, Dis- and Misinformation



The predictors are shown on the interwoven macro-level of societal institutions, meso-level of intergroup relations, and the micro-level of individual conspiracy beliefs.

relationships contribute to the susceptibility to polluted information and co-radicalization processes. Finally, at the micro-level, basic cognitive biases and social needs of human beings increase the propensity for conspiracy beliefs. The spiral image comes to show that mis- and disinformation, as well as conspiracy stories, not only thrive on the decline in trust on all three levels, but also fuel distrust in return.

4.1. Trust at the Societal Level: Democratic Institutions and News Media

4.1.1. Relevance and Status of Trust at the Level of Social Systems

Trust in democratic institutions is a central pre-condition of the democratic process. Voting is always a decision that involves uncertainty, as it is focused on the future. Voting reflects citizens' expectations that the candidates, parties, or policies they support will fulfill their promises, as well as voters' trust in the political system itself, i.e., the willingness to stay in a country and the expectation of being able to live a reasonable life there. The interplay of these two dimensions results in the stability of the social order,[29] which is the foundation of democratic system.

The democratic system is intrinsically interwoven with the concept of a public sphere. To retain its legitimacy, democracy needs to be perceived as accountable and responsive to the will of the citizens in its decision-making process. Public communication facilitates (or hinders) this accountability and responsiveness.[30] Consequently, journalism plays an important role in democratic societies.[31] A free and unrestricted media system is a fundamental basis for citizens' ability to inform themselves, discuss political issues and formulate their own opinions.[32] To fulfill this function, however, citizens need to trust the news media and journalists need to be perceived as trustworthy by providing the facts on which unbiased public opinion is based.

Voting reflects citizens' expectations that the candidates, parties, or policies they support will fulfill their promises, as well as voters' trust in the political system itself.

Research has shown that trust in the news media is associated with trust in democratic institutions, as people who distrust "the media" also report lower levels of trust with regards to democratic institutions.[33] Further, trust in democratic institutions is related to support of democracy, while lower levels of support of democracy are indicative of lower levels of trust in democratic institutions and the media across many countries.[34] It is thus of little surprise that trust in the news media is positively associated with political trust, and negatively associated with strong partisanship.[35] A recent study on trust in the EU showed that people who trust their national governments are more likely to trust the EU.[36] However, this relationship is reinforced by the variability and tonality of reporting on the EU in each country, demonstrating the interplay between democratic institutions and the media.

Given the centrality of trust for social order in democratic societies, declining trust in democratic institutions and news media in many has raised concerns in many countries.[37] Despite an overall trend, cross-national comparisons of different trust dimensions, such as trust in the media, the government, or in society more generally, reveal large differences between countries over time, raising the question of underlying causes.[38] For example, Northern European countries, such as Finland, Norway, and Sweden[39] persistently show

high and relatively stable levels of trust in society and democratic institutions, while citizens from South America, Eastern and Southern Europe show lower and declining levels of trust in society and institutions. One explanation for these differences is the perception of the economic situation in a country and individual well-being, but these factors only partially explain country differences, e.g., between European countries.[40]

> **Cross-national comparisons of different trust dimensions, such as trust in the media, the government, or in society more generally, reveal large differences between countries over time, raising the question of underlying causes.**

4.1.2. Predictors for Declining Trust

Declining levels of trust in democratic institutions and journalism have multiple roots. For instance, perceptions of trustworthiness are dependent on an institution's integrity and reputation over time, making trust vulnerable to misbehaviors and cases of corruption. Abuse of office and misconduct by journalists and politicians have and will contribute to declining trust levels.

Besides such single case factors, however, there are also overarching factors associated with declining levels of trust, such as social inequality[41] or political polarization, which increase conflicts between societal groups and can thus reduce resilience to dis- and misinformation. Social inequality is associated with social distance between privileged and underprivileged social groups in a society. Political polarization can be understood as "the extent to which different political parties offer different ideologically distant policy platforms"[42] and is associated with an affective polarization among the parties' supporters, i.e., the extent to which they dislike the other party and potentially also the supporters of the other parties.[43]

Polarization threatens trust in democratic institutions because citizens whose favored party is not represented in government are more likely to distrust the government and subordinate institutions.[44] Moreover, individuals with lower levels of political trust are less likely to participate in the democratic process by casting their votes.[45] Polarization also negatively affects trust in news media because citizens tend to be dissatisfied with their national governments, which feature prominently in political reporting,[46] and because it decreases tolerance for the variety of views expressed via news outlets.

> **Polarization threatens trust in democratic institutions because citizens whose favored party is not represented in government are more likely to distrust the government and subordinate institutions.**

4.1.3. Outcomes in the Context of Dis- and Misinformation

Dysfunctional democracies[47] and polarized societies are particularly vulnerable to mis- and disinformation. For instance, citizens in highly polarized environments are more likely to be receptive to positive information about their own camp and negative information about the opposing camp, even if this information is false.[48]

There is also a direct link between low trust in news media and vulnerability to believing disinformation.[49,50] Legacy media in many countries are a contact point for trustworthy information and they often correct mis- and disinformation. Perceiving legacy media as hostile and untrustworthy, however, motivates the consumption of alternative news sources,

including hyper-partisan outlets and social media platforms,[51,52,53] which are often a hotbed for news outlets that perpetuate distrustful worldviews by challenging journalism's authority[54] and transmitting anti-elitist and populist slants.[55,56,57]

Following a reinforcing spiral logic,[58] polarization, distrust, and exposure to misleading information mutually influence each other. Exposure to negative information about another camp can fuel affective political polarization[59] and exposure to misleading information such as political "deepfake" videos leads to a decline in trust in news encountered in social media.[60]

4.2. Trust at the Intergroup Level: Intergroup Conflicts

4.2.1. Relevance and Status of Trust at the Intergroup Level

People have a general tendency to evaluate information and trustworthiness through the lens of their group-memberships, their "social identities."[61] Social identities emerge from people's membership in social 'ingroups,' for instance, identifying as a voter or member of a certain political party, a religion, or gender.

Evolutionarily speaking, ingroups serve as "containers of generalized reciprocity"[62] - supporting an ingroup member is likely to pay out over time, whereas trusting outgroups has historically been riskier.[63] The more central group-memberships are to peoples' self-concept (i.e., how much people see themselves as US-Americans, as Hindus, or as Republicans), the more they tend to see their respective ingroup in a positive light. People want their sports team to be more successful than the neighboring club, their religion to be morally superior, and their political party to be more trustworthy than the opposing alternatives.

4.2.2. Predictors of Declining Trust

Although people have a general propensity to be biased in favor of their ingroups, these biases become exaggerated in times of existential threat, such as when uncertainty is high or when people are concerned about the fragility of their lives.[64] During such times, being part of a superior and clearly distinct group helps one symbolically manage these kinds of threats[65] and thus one's group identity becomes particularly relevant.

Ingroup prejudice is also reinforced in contexts of past atrocities and intergroup hostilities. Intergroup distrust at the national or global level is a significant obstacle to peaceful coexistence, as countless examples of enduring conflicts show (e.g., the Israeli-Palestinian[66] and Indo-Pakistani[67] conflicts, or the conflict in Northern Ireland).[68] Uhlmann et al.[69] used a society simulation (using agent-based modelling) to show how such distrustful relationships emerge and persist. Their work highlights the role of the dominant majority in a given society by showing that even low levels of initially unfair prejudice from a dominant majority in a society were associated with diminished cooperation of that majority with the rest of society. Via a self-fulfilling prophecy logic, members of the minority learned to be uncooperative and became reluctant to invest in cooperation. In both the majority and the minority, new generations learned to distrust the outgroup and adapted their beliefs in this regard, stabilizing distrustful relationships over time and across generations. Such experiences of ostracism and marginalization can make people more susceptible to radical ideas and extremist groups.[70,71]

4.2.3. Outcomes in the Context of Dis- and Misinformation

The need to see one's ingroup in a more favorable light than outgroups makes people vulnerable to mis- and disinformation.[72] It is easier to accept stories about misbehavior by others than to scrutinize information that presents their own group in a negative light.[73,74] In the words of Corbu and Negrea-Busuioc, misinformation "is credible exactly because it resonates with prior stereotypes in people's mind."[75] Misinformation accordingly is often shaped by pre-existing rifts in a society. In a comparative content analysis, Humprecht showed that mis- and disinformation in the US and UK often attacks political actors, while in Germany and Austria false stories about immigrants are dominant.[76]

Across the world, dis- and misinformation that perpetuates prejudices attitudes has been associated with toxic outcomes: From successful partisan false news stories in the US,[77] to rumor-inspired mob-violence and lynching in India[78] and false stories targeting the Muslim minority of the Rohingya in Myanmar,[79,80] disinformation relying on distrustful intergroup relationships has been associated with physical violence.[81]

Such hateful and violent escalations reinforce existing intergroup conflicts. Groups that thrive on intergroup hate, such as extremists, use violence from the "other side" to legitimate their own violence as defensive.[82] This narrative provides a fertile ground for further violence,[83,84] contributing to co-radicalization processes. For instance, an analysis of online content from right-wing extremists and Islamic extremists in Germany showed how they used the (accused) atrocities of the other side to justify their own extremism.[85]

4.3. Trust at the Level of the Individual: Distrust and Conspiracy Beliefs

4.3.1. Relevance and Status of Trust at the Interpersonal Level

Similar to the macro and meso level, (dis-) trust at the individual level has multiple causes and changes over time, depending on the trustees' behavior (i.e., whether a politician indeed acts for the good of her or his voters) but also on an individual's other experiences in associated areas (e.g., with politicians in general).[86] In what follows, we will focus on one specific type of distrust crucial for mis- and disinformation: The conspiracy mindset or 'conspiracy mentality.'

Conspiracy mentality can be understood as generalized attitude, i.e., a propensity that shapes the response to different objects, persons, or contexts, in this case a generally distrustful attitude towards power[87,88] and an openness to believing in conspiracy myths[89] (e.g., the existence of a 'new world order') and conspiracy stories (such as the new world order having created the coronavirus).[90,91] A conspiracy story is the explanation of socio-cultural events as being caused by a conspiracy, the secret collaboration of a group of people, the conspirators, whose intention is to achieve a malevolent goal (e.g., Jewish billionaire George Soros having caused the migration crisis). A conspiracy myth is the overarching narrative connecting different stories (e.g., anti-Semitism).[92] Notwithstanding, real conspiracies exist (powerful people do sometimes act maliciously against the common good in secret) and it is likely that conspiracy mentality has evolved as a functional adaptation to the human need to detect such misbehaviors by those in power[93,94] as blind trust in a malicious elite can have dangerous consequences. The challenge is to decrease conditions under which people are prone

to believe in fictional conspiracies, as the general distrust towards power[95] is antithetical to the successful navigation of the modern world.[96]

Surveys across countries often find a substantial positive reception to conspiracy stories. For instance, Oliver and Wood[97] found that 55% of US-Americans believed in at least one out of the seven conspiracy stories presented in the survey, and a poll in New Jersey found that only six percent of respondents believed in none of the presented conspiracy stories.[98] In a survey conducted in Egypt and Saudi-Arabia, the numbers were comparably high: 67% of respondents thought that it is at least somewhat accurate that the US is secretly helping the "Islamic State" jihadist group to take power in Syria and Iraq.[99] These high numbers underscore the notion that conspiracy beliefs emerge from basic human cognition such as the ability to detect patterns in the world or the vigilance towards potential threats, and cannot be conflated with psychological disorders such as paranoid thinking.[100] Anyone might be prone to fall for a conspiracy belief now and then.

4.3.2. Predictors of Conspiracy Beliefs

Based on a literature review, Douglas et al.,[101] highlighted three central motives for the belief in conspiracy stories. (1) Epistemic motives, i.e., peoples' desire to build an internally consistent understanding of the world. Particularly in the context of large and significant events, this desire can make them susceptible to conspiracy theories seemingly providing an explanation as large and significant as the event itself. (2) Conspiracy stories appeal to existential needs for control and security. If bad things happen due to bad actors, they become (theoretically) avoidable and controllable. Accordingly, conspiracy theories, similar to rumors and disinformation, have always accompanied human crises.[102] (3) Finally, conspiracy beliefs are also related (though the causal chain is unclear) to different social motives such as the need to see oneself and one's community in a positive light.[103]

Besides these more micro-level variables, meso- and macro-level variables also affect susceptibility to conspiracy beliefs. Although a comparison of different European countries and the US concluded that the national context in which respondents reside has hardly any effect on their level of conspiracy mentality,[104] trust at the macro-level of the political system as well as trust in public figures did significantly shape participants' propensity to fall for conspiracy stories. Accordingly, members of marginalized minorities are more likely to believe conspiracy stories.[105]

4.3.3. Outcomes: The Context of Dis- and Misinformation

Conspiracy mentality can increase the susceptibility to mis- and disinformation,[106] particularly when the content resonates with pre-existing distrust.[107] Conspiracy beliefs also make it difficult to convey expert opinions. People scoring higher on conspiracy mentality have been found to perceive a bogus medical drug as being more effective when approved by a powerless group (in this case: patients) as compared to approval of the same drug by a powerful pharmaceutical consortium.[108]

Conspiracy beliefs have been linked to non-normative and even violent behavior.[109] Representative data from Germany show a link between violent extremism and conspiracy beliefs,[110] and experimental as well as long-term data demonstrates that conspiracy mentality is linked to deviant behavior.[111]

Consistent to the assumption of reinforcing processes, experimental studies show that the exposure to conspiracy stories can further decrease trust on the macro and meso-levels. Exposure to conspiracy theories decreases trust in governmental institutions,[112,113] even if the conspiracy theory itself does not target these institutions.[114] Similarly, it also fosters prejudice towards outgroups, even if these groups are not

direct targets of the conspiracy theory.[115] Although a lack of trust in a specific individual, institution, or context is not equivalent to the generalized distrust towards power reflected in conspiracy mentality, conspiracy stories seem to activate a distortive lens which is likely to make those frequently exposed to such content more susceptible to further mis- and disinformation that relies on distrust narratives.

4.4. Interim Summary: The Multi-Level Nexus of Trust and Dis- and Misinformation

Table 1 summarizes the main aspects discussed so far. Trust was already fragile and societies already vulnerable to dis- and misinformation before COVID-19 hit the world in 2020. Particularly societies plagued by a high level of polarization and inequality, and those that had experienced manipulations by political elites or the media experienced declining trust in societal institutions. In such societies, discrimination against minority members has often been passed down from one generation to the next, and a large proportion of citizens has already been led to believe in conspiracy stories. Factors at several levels emerge, all of which increase vulnerability to mis- and disinformation and, in turn, are reinforced by mis- and disinformation in a vicious cycle. In the next section, we discuss how the nexus between distrust and dis- or misinformation played out during the first year of the COVID-19 crisis.

Table 1.
Predictors, State, Outcomes, and Reinforcing Components of the Trust/Disinformation Nexus

Selected predictors of declining trust	State before the pandemic	Selected outcomes in the context of mis- and disinformation	Reinforcing component
→ Misbehavior → Inequality → Polarization	→ Declining levels of trust in political institutions and legacy media	→ Higher susceptibility for mis- and disinformation → Less contact to debunking via information authorities	→ Increased polarization → Decrease in trust in news on social media
→ Intergroup biases, amplified by existential threats → Discrimination by majority members	→ Histories of intergroup conflict	→ Higher susceptibility to mis- and disinformation → Hateful and violent escalations of enduring tensions	→ Co-radicalization → Legitimization of violence as defensive
→ Cognitive need to form a coherent understanding of the world, enhanced in the context of significant events → Existential need for uncertainty reduction and (illusion of) control → Social need for positive self- and group image	→ Large proportion of the population eager to fall for at least some conspiracy stories	→ Propensity to fall for mis- and disinformation matching the distrustful perspective on power → Propensity to rate authoritative information as credible as lay-peoples' opinion → Increased acceptance of non-normative and even violent behaviors	→ Decreased trust in societal institutions → Increased prejudice towards outgroups

5. Trust and Disinformation during the COVID-19 Pandemic

During crises, uncertainty about the potential risks, measures, and consequences is high, and accordingly, people have a strong need for reliable information.[116] Moreover, successful management of crisis often crucially depends on citizens' willingness to follow public advice, i.e., to trust in the good intentions of implemented measures, the probability that they will alleviate the crisis, and the integrity of those instituting them.

> **During crises, uncertainty about the potential risks, measures, and consequences is high, and accordingly, people have a strong need for reliable information.**

COVID-19 was accompanied by an unprecedented global flow of mis- and disinformation.[117] Frischlich et al. found that 16% of Germans had been exposed to at least one conspiracy story circulating at that time; 34% recalled medical misinformation.[118] Single conspiracy stories, such as the positing of a link between the pandemic and 5G technology, circulated across the globe, resulting in nearly 90,000 posts on Facebook alone between January 1 and April 12, 2020.[119] A substantial share of the circulating misinformation and conspiracy stories draw from already existing storylines (e.g., a distrust towards political elites, new technologies, or social minorities), making it even more likely that this kind of content will resonate with pre-existing societal breaking points. Continuing this line of exploration, in the next sections we will consider these societal breaking points in greater detail by examining the impact COVID-19 had on trust at the level of societal institutions, social groups, and the individual's propensity to believe in conspiracy stories. We will then review evidence for direct negative effects of distrust on pandemic control and democracy.

5.1. The Level of Societal Institutions

5.1.1. Changes with Regards to Trust in Democratic Institutions and News Media

COVID-19 became a polarizing topic in numerous countries. For instance, well into the pandemic, US President Donald Trump denied the danger of the virus and even mocked those wearing protective masks.[120] Similar statements were made by Brazil's president Jay Bolsanero[121] and, initially, UK's president Boris Johnson[122] – three countries with the largest number of daily new infections in January 2021.[123] In the UK and the US, initially high levels of trust in the government had fallen substantially over the course of the summer, reaching levels below 50% by summer in both countries.[124,125] In Brazil, trust levels were more stable, with 60% of the citizens trusting the president's statements at least sometimes.[126] However, cross-country comparisons showed that Brazilians were amongst those most dissatisfied with their government's handling of the pandemic.[127]

In other countries, the government took the virus more seriously as the example of New Zealand shows, where travel restrictions were implemented as early as February, weeks before the first case was noted in the country.[128] Although New Zealand also witnessed a loss of trust when the second lockdown had to be implemented in August, 79% of New Zealanders continued to trust that their government was handling the pandemic appropriately.[129] In Germany, measures were implemented later, but, nevertheless, the overall level of trust in the government remained relatively stable.[130]

Similar to trust in the government, trust in news media varied over time and across countries. While US- and UK citizens lost their trust in the news media over the course of the year,[131,132] Germans reported initially slightly higher but overall stable levels of media trust.[133] Not only trust in news media, but also the use of news media changed over the course of 2020. Many countries witnessed an increase in news consumption during the first months of the pandemic,[134] a development typically observed after significant events and during crises.[135] A survey from the UK showed a rapid increase in news avoidance only few months later.[136]

5.1.2. Polarization and Distrust Endanger Successful Pandemic Control

Political leaders' response to the pandemic was reflected in voters' attitudes towards pandemic-control measures, as illustrated by the US example. In June 2020, the Pew Research Center showed that fewer than half of Republicans (45%) but more than two-thirds of Democrats (77%) were very or somewhat concerned that they might unknowingly spread the coronavirus.[137] One month later, a Gallup poll showed in another representative sample that while six out of ten Democrats (61%) always used masks outside of their home, only two out of ten Republicans reported a similar strict use. Three out of ten Republicans (27%) stated that they would never use masks – a sharp contrast to only one in hundred Democrats stating the same.[138]

Citizens may fail to comply with pandemic control behaviors due not only to political leaders' negative modeling, but also due to an overall lack of trust in the government. In Germany, trust in the government was a relevant predictor for citizens' willingness to accept and adopt the government's protective regulations[139] and governmental trust has been linked to acceptance of COVID-19 vaccines across the world.[140]

5.2. The Intergroup Level

5.2.1. Changes with Regard to Intergroup (Dis-) Trust

As already discussed, intergroup biases are exacerbated in times of uncertainty, increasing the likelihood for distrustful relationships towards outgroups. COVID-19 was no exception. For instance, Hungary's current president Viktor Orbán used the pandemic to fuel xenophobic and anti-migrant rhetoric,[141] and President Donald Trump frequently called the coronavirus the "Chinese virus," spreading bigotry as he linked the disease with its place of origin.

Preliminary evidence shows that news about COVID-19 fueled prejudice towards a range of groups, particularly towards citizens of countries struggling the hardest with the pandemic.

Of little surprise, Anti-Asian prejudice has flourished in the U.S. over the course of the year,[142] but has also been on the rise in other countries. The toxic effect of the pandemic on intergroup relationships is also not restricted to a single target group: Preliminary evidence shows that news about COVID-19 fueled prejudice towards a range of groups, particularly towards citizens of countries struggling the hardest with the pandemic.[143]

5.2.2. Prejudice and Discrimination Might Destabilize Society for a Long Time

Prejudice against social minorities should not be taken lightly as they can easily lead to biased societies over time (see section 4.2), though the consequences of hardened intergroup barriers and increasingly distrustful relationships between social groups due to the pandemic are likely to emerge only in subsequent years.[144] Steven

Vertovec of the Max Planck Institute for the Study of Religious and Ethnic Diversity warns that such prejudice can even transform into stigmatic suspicion of people perceived as Asian, as well as migrants and refugees, thus increasing the risk of ethnic profiling, institutional discrimination, geographical segregation and impaired intergroup interactions.[145]

5.3. The Individual level

5.3.1. Changes with Regards to Conspiracy Stories and Beliefs

As explained before (see section 4.3), conspiracy theories flourish under conditions of uncertainty and during crisis. For instance, in 2008, 25% of US citizens believed that the financial crisis at that time was "secretly orchestrated."[146] Similarly, more than a decade later, 25% of US-Americans believed that the COVID-19 outbreak had been "intentionally planned by powerful people."[147] Although concrete concerns of economic disadvantages through COVID-19 (e.g., a lurking recession)[148] were associated with the propensity to fall for conspiracy stories, repeated surveys in Germany found little evidence for an overall higher share of the population believing in COVID-19 related conspiracy stories: In May 2020, 18% of the population believed either that COVID-19 was a hoax and/or a man-made bioweapon. In November that share slightly decreased to 15%.

5.3.2. Conspiracy Beliefs Endanger Successful Pandemic-Control

The proliferation of COVID-19-related conspiracy stories and myths has had multiple undesirable consequences from the perspective of pandemic control. People who believed in the conspiracy story that the virus was a hoax were less likely to engage in preventive behaviors,[149] more likely to reject vaccines,[150] more likely to take part in demonstrations where preventive measures were not observed,[151] and less willing to follow government recommendations.[152] Other studies found a link between believing in conspiracy stories and the acceptance of violence – for instance, destruction of 5G pylons falsely presumed to contribute to the virus' spreading in a prominent conspiracy story that travelled the globe in 2020.[153] In Germany, experimental research demonstrated that even brief exposure to a conspiracy story about the virus decreased trust in the government,[154] indicating that future infodemics might benefit from their predecessors.

People who believed in the conspiracy story that the virus was a hoax were less likely to engage in preventive behaviors, more likely to reject vaccines, more likely to take part in demonstrations where preventive measures were not observed, and less willing to follow government recommendations.

5.4. Interim Summary: COVID-19 Added "Fuel to the Fire"

At all three levels, COVID-19 exacerbated pre-existing societal breaking points, such as ones resulting from political polarization, distrust in the government, the reinforcement of intergroup biases, and culminating in the heightened need for explanations seemingly answered by conspiracy stories. Particularly, lack of trust in societal institutions coupled with conspiracy beliefs were also demonstrated to directly impair successful control of the pandemic. Still, the fall-out of heightened discrimination may prove to be the most severe outcome in the long run.

Without detracting from the gravity of this state of affairs, it was encouraging to find that changes were often not dramatic at the macro- and micro-level: Governments handling the pandemic more successfully witnessed a lower decline in trust, and the share of those believing in conspiracy narratives remained relatively stable over the course of the year.

Due to the fact that the pandemic was overall accompanied by raised levels of prejudice and polarization, increasing the likelihood of a downward spiral of distrust and rendering our societies more vulnerable to future crises, in the final section of this paper we offer recommendations on ways to help circumvent the negative trajectory and increase societal resilience to mis- and disinformation in the long run.

Governments handling the pandemic more successfully witnessed a lower decline in trust, and the share of those believing in conspiracy narratives remained relatively stable over the course of the year.

6. Preventing the Downward Spiral of Distrust

6.1. At the Level of Societal Institutions: Counter Inequality, Polarization, Distrust, and Disinformation

As argued before, an important prerequisite for trust in democratic institutions is support of democracy. Such support can only be generated if the separation of powers is properly maintained, and the pillars of democracy stand on solid ground. This includes ensuring that all citizens can benefit equally by combating economic and social inequality to weaken the foundations of distrust (see section 4.1).

Politicians should refrain from contributing to the spread disinformation and affective polarization in order to pursue their short-term goals, for example during pre-election periods.

Individual politicians bear a great responsibility. As leaders and shapers of public opinion leaders, they reach a particularly large number of people with their communicative efforts and thus have a substantial influence on opinion formation, apparent, for instance, in the polarized attitudes towards measures to curb the pandemic in the US. Negligent handling of the truth on the part of public representatives can have detrimental consequences for democracy, undermine public support of institutions, and fuel distrust and disinformation. Politicians should refrain from contributing to the spread of disinformation and affective polarization in order to pursue their short-term goals, for example during pre-election periods.

In a similar vein, professional journalism as practiced by most legacy news media has a responsibility regarding the way topics are prepared, facts are checked, and actors are presented. This refers to news reporting in general but also dealing with mis- and disinformation. For instance, research by the Engaging News Project demonstrates that transparency about investigative processes in general, and the process resulting in a given news article, can increase the perceived trustworthiness of news articles.[155] Transparent reporting is thus one approach to maintain and restore trust in the media. Legacy media also have a responsibility to report on disinformation and conspiracy stories in an appropriate way. While it is their responsibility to correct such information, they need to react with caution and refrain from spreading unvetted personal opinions due to various considerations. Repeating conspiracy theories or misleading statements can foster an 'illusory truth' effect in which people perceive the statement as more trustworthy simply because they are already familiar with it – even when its content is highly implausible.[156] In a recent essay, Tsfati and colleagues thus called for an intensified examination of legacy media's role in (unintentionally) raising awareness of specific disinformation pieces and contributing to the infodemic.[157]

> **Legacy media can be enabled to possibly reduce the feeling of citizens that their voices are not represented and contribute to an overall more fruitful environment for trust at the societal level.**

Last, but not least, the interconnectedness of trust in news media and democratic institutions makes news media a relevant factor for trust in institutions such as national health authorities and international organizations, e.g., the WHO, which play a key role during the pandemic. However, journalism's normative function does not include creating trust but providing factual reporting and holding those in power accountable. As such, journalistic independence must be guaranteed, for example by ensuring sufficient funding for independent or public media. By doing so, legacy media can be enabled to possibly reduce the feeling of citizens that their voices are not represented and contribute to an overall more fruitful environment for trust at the societal level.

6.2. At the Level of Social Groups: Address Enduring Intergroup Conflicts and Enable Positive Intergroup Contact

As established above, prejudice flourishes in times of crisis (see section 4.2) and endangers social peace and citizens' well-being. Accordingly, means of combatting prejudice and ensuring inclusion, and constant engagement against prejudice, discrimination and historically conflicted relationships are needed to bolster societal resilience against mis- and disinformation.

One social psychological approach that has been well-established for improving intergroup relationships is based on the contact hypothesis by Allport.[158] The contact hypothesis postulates that a positive interaction (e.g., a project, a joint game, or a shared festival) between members of different social groups reduces prejudice. However, this so-called positive contact requires some preconditions: First, members of different groups need to have an equal status in the contact situation (for instance, all being students, or members of a sports team). Second, the situation should require them to cooperate with one another to achieve a common goal (for instance, to engage in joint community work), and the relevant authorities, whether a sports trainer or the government, laws, and societal norms in general, should treat all equally and

support the cooperation.[159] Ample evidence has shown that such contact can reduce anxiety with regard to the "others," allowing people to learn more about the other side, and feel more empathy towards them. Positive contact can help to blur intergroup boundaries, thus fostering resilience to disinformation.[160]

As van Bavel et al. concluded in a recent think-piece: "the pandemic not only highlights a common identity with individuals all facing the same risk but could also foster a sense of shared fate. By highlighting an overarching identity, politicians, the media, and opinion leaders could help reduce political division around the issue."[161] New Zealand's central campaign 'unite against COVID-19' tries to employ such an inclusive "we." As trustworthiness perception depends on perceived integrity and reputation, however, these and similar attempts must be seen as implemented honestly in the political echelon.

6.3. At the Level of the Individual: Empower Citizens, Provide Certainty, and Value

As described above (see section 4.3), the human, epistemic need to form a coherent understanding of the world can be exploited by mis- and disinformation or conspiracy stories. Information literacy addressing this need is thus important in combatting the information disorder. Trust alone is not enough, but must be accompanied by citizen awareness of the pervasiveness of misleading information, ongoing, active reflection ones' own role in the infodemic (i.e., that one's digital actions such as liking or sharing can have far-reaching consequences), and empowerment to scrutinize content encountered online.[162] Different studies have highlighted the role of analytical thinking in citizen empowerment against conspiracy stories,[163] disinformation in general,[164] and regarding COVID-19 in general.[165] Platform design can play an important role here: In September 2020, the micro-blogging service Twitter presented a new approach to curb the flood of disinformation by encouraging users to read articles and comment on a tweet before sharing it.[166]

Other studies have highlighted the relevance of "inoculating" people by providing them with weak "doses" of the arguments employed in mis- and disinformation and warnings that they fall prey before they encounter them.[167] Such inoculation can be highly entertaining: The creators of the game "Bad News,"[168] which allows users to actively create their own "fake news," showed in several studies that playing the game enabled participants to detect common misinformation techniques including conspiracy ideations and attempts to fuel polarization.[169]

Different studies have highlighted the role of analytical thinking in citizen empowerment against conspiracy stories, disinformation in general, and regarding COVID-19 in general.

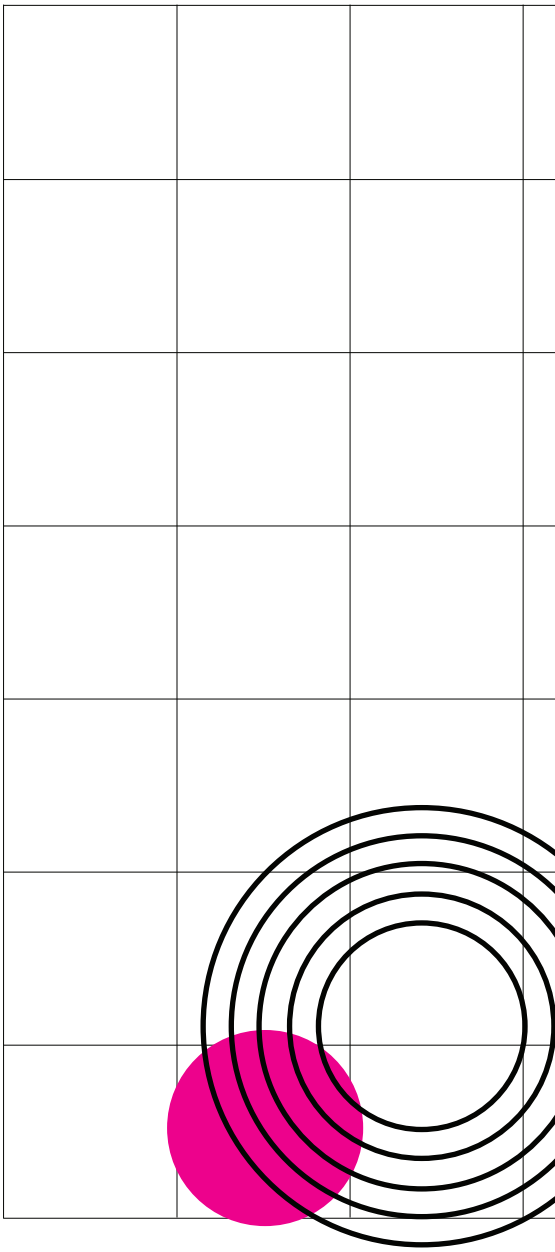
News literacy alone, however, is not enough. Conspiracy beliefs are also driven by cognitive needs for certainty and perceived control. Therefore, policy measures to reduce personal economic uncertainties[170] and provide people with a sense of control fosters their resilience towards conspiracy stories.[171] In a related vein, measures addressing peoples' social needs, such as their need for a positive self- and group image, are needed to eliminate docking points for conspiracy stories. For instance, laboratory studies show that offering individuals an affirmation of their values reduces their beliefs in conspiracy stories.[172] Societies providing such an affirmation of their citizens' values and allowing them to feel like valuable members of society are thus likely to be less vulnerable to mis- and disinformation or conspiracy theories.

7. Concluding Remarks

Taken together, erosion of trust at the level of societal institutions such as politics or the media, between social groups, or individuals' conspiracy beliefs, increases societies vulnerability to mis- and disinformation, endangers social stability, and substantially impairs successful control of public crises such as the COVID-19 pandemic.

Fostering societies' resilience, i.e., the ability to "bounce back" and retain their democratic structure in face of the inherent uncertainty during times of crisis is possible, but this effort requires taking long-term developments such as polarization, inequality, and intergroup conflicts as well as personal uncertainties into consideration. Furthermore, the different actors in the information eco-system, including state institutions, politicians, scientists, the media as well as the internet platforms must ensure reliable information, act transparently, and build a reputation of being trustworthy over time.

Finally, citizens must be empowered to handle information responsibly. In this context, platform policies aimed at limiting the spread of misleading information can contribute to a healthier information eco-system and help prevent reinforcing processes of distrust through the consumption of mis- and disinformation. Just as a society is more than the sum of its parts, facing up to the infodemic needs to be a joint effort by all parts of our increasingly digitized and networked societies.



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2 Wardle, C. (2018). The need for smarter definitions and practical, timely empirical research on the information disorder. Digital Journalism, 6(8), 951–963. https://doi.org/10/gfj4br

3 Resilience in a physical sense means that an object can resume its original shape after shocks, or after having been stretched or bent. In psychology the term is used to describe the human ability to return to prior levels of well-being after challenges. See, for example, Southwick, S. M., & Charney, D. S. (2012). Resilience: The science of mastering life's greatest challenges. Cambridge University Press. In the context of uncertainty, trust, and mis- and disinformation, resilience can be understood as societies' ability to maintain their democratic structure in times of crisis and to resist and/or actively oppose misleading information and anti-democratic influences. Resilience helps citizens return to their cognitive, emotional, or and behavioral state despite an infodemic, or even to make progress toward overarching democratic aims and values.

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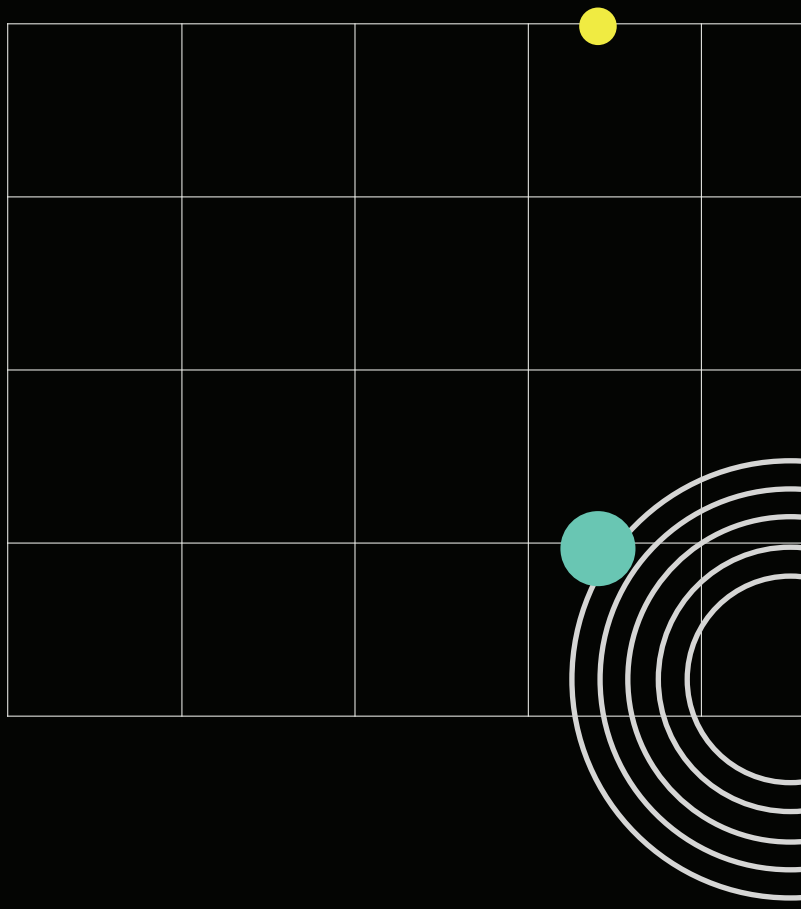

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