



Coping Strategies Against Information Disorder

Guidelines for first-liners



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Chapter 1

Understanding 'fake news'

Target group

These guidelines are targeted towards so-called “first-liners”. “First-liners” is an overarching term for all people in direct contact with people who are vulnerable to information disorder, focused on groups in vocational education. Examples of people who fall under the umbrella term are: educators, teachers, trainers, youth counsellors and advisors, social workers and youth workers. This is a non-exhaustive list, however. The scope of this project also includes other people working in the educational, social or health care sector.

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1.1 Introduction to this chapter

In recent years, there has been a widespread use of the term “fake news.” However, it is important to understand what this term actually means. In essence, it refers to false stories or misinformation that circulate on the internet or through various media channels. Another term commonly used to describe this phenomenon is “information disorder.” In the following subchapters, we will delve into the topic of information disorders, starting with an explanation of the purpose of information. Subsequently, we will explore false information in more detail, including the different types and their underlying motives. By doing so, we will highlight the varying levels of harm associated with false information. It is crucial to recognise that when false information is spread with harmful intentions, it can give rise to significant problems. We will explain the reasons why people believe in such false information, along with examining the mechanisms and impacts it has on the collective mindset. To provide further clarity, this publication will offer examples of instances involving false information.

1.2 The digital information society

Young people are citizens in today's digital society who can participate in online debates and discussions, express their concerns, and take action. To ensure their safe, effective, critical and responsible participation in the digital realm, they require digital citizenship. Digital citizenship is generally understood as the competences that are needed for active participation in the digital society. In recent years, the understanding of digital citizenship has evolved to encompass a wide range of competences and behaviours that empower young people to leverage the internet's opportunities for active participation, while safeguarding them from potential risks and harms that are associated with it.

One of these competences that are central to digital citizenship concerns media and information literacy, or the ability to understand and critically engage with information on the internet. Reliable information forms one of the cornerstones of well-functioning democratic societies. Access to this information allows citizens to participate in decision-making processes (by carefully weighing all information when exercising their right to vote) and to hold governments accountable. Citizens generally rely on the news media for overall coverage of the most important information on politics, societal issues, economics, and other events that are relevant to the functioning of society. As it is impossible for newsrooms to cover every event happening across the world, news items are selected and covered by journalists. Newsroom processes such as editorial gatekeeping and fact-checking allow for reliable news coverage of the most relevant events.

More recently, however, with the widespread expansion of the internet and social media, the information environment has changed drastically. Some scholars propose that we are currently in a state of "information cacophony", which is characterised by "the jarring noise of many, discordant voices offering up information, under conditions of low media trust" as quoted from Cotter & Thorson in 2022. As contemporary technologies allow for the distribution of information on a global scale, messages are created, shared, and consumed in an increasingly complex information environment. With digital technologies being widely accessible, it is easier than ever before for anyone to create and share information. Mobile devices specifically have accelerated this evolution: information can now be shared at immense speeds, at any time and at any place. Additionally, with the exploding popularity of social media platforms, consumption of information has evolved from a private, solitary activity into a public and shared one. Through these platforms, people are becoming increasingly reliant on their friends, relatives, colleagues, or other acquaintances in their networks to guide them through the complex web of information with their endorsements and recommendations. However, it is important to note that platforms do not serve as neutral communication pipelines. Instead, they are driven by billions of individual users, each with their own backgrounds, values, and goals, and each producing messages that reflect these positions.

1.3 Information disorder

The issue of false and fabricated information on the internet and especially on social media has received increasing attention from scholars and policymakers over the past years. Events such as the 2016 presidential election in the US, the Brexit campaign in the UK, the Covid-19 pandemic and most recently the Russian invasion of Ukraine especially seem to have placed a spotlight on the threats and risks of false information on the internet.

In their report for the Council of Europe, Wardle and Derakhshan have labeled the several types of false or misleading information that is circulating online as “information disorder.” More specifically, they distinguish between three types of information disorder: misinformation, disinformation, and malinformation. The distinction between these three types of information disorder is made based on two elements. First, a distinction is made between messages that are true, and messages that are false. Second, attention is paid to the intention behind the message, whether the individual or organisation who shared the message intended to harm, or whether harm was unintentionally inflicted.

There are two primary categories of false information: misinformation and disinformation. Misinformation refers to information that is inaccurate or false, but the person disseminating it is unaware of its falseness. In other words, there is no intention to deceive or harm others. Although misinformation can still have an impact on those who receive it, it is not shared with the explicit intention of causing harm. When non-factual information is unintentionally shared, regardless of the underlying reasons, it falls under the classification of misinformation.

Conversely, disinformation is shared with malicious intent. The source is aware of the untrue nature of the information; however, they share it anyway to cause harm to an individual, social group, organisation, or country, and hence to mislead the receiver of the message. Often, the dissemination of false information is driven by the desire to promote a specific moral or political perspective or advance a particular cause.

Unlike the previous two, the third type, malinformation, is based on factual information. Yet, what makes it malinformation instead of just ‘information’ is that this true information is shared with the intention of causing harm. The origin of the information stems from truth but is taken out of context or exaggerated to promote a specific moral or political agenda. Malinformation generally concerns issues such as hate speech, harassment, and leaks of confidential information.

To understand information disorder, it is useful to note that it generally involves three elements. The first central element of information disorder concerns the agents that created, produced, distributed the piece of information, and their motivations behind the information. Second, it is important to consider the message and its characteristics, such as its format. Third, an important role is played by the interpreter: how did the receiver of the message interpret it and which action did they take in response to the message? Here, it is important to note that audiences are very rarely passive recipients of information, but instead interpret the piece of information from their own background, e.g., based on their social status, political ideas, or past experiences.

Information disorder usually takes place in three stages. The first stage, creation, involves the development of a message by an individual. In the production stage, this message is transformed into a media product that has the potential to reach a wide audience. Finally, in the distribution stage, the message is made public and disseminated among the intended audience.

Within the three overarching types of information disorder, there are seven distinguished categories of problematic content that aid in better understanding the complex information ecosystem. These seven categories are placed on a continuum based on their intent to deceive.

1. The first category, with the lowest intent to deceive, is satire or parody. Producers of satire have no intention to cause harm, but their content has the potential to fool audiences. Much discussion has gone on about whether satire should be included as a type of problematic content. However, it is important to note that satire is increasingly being used strategically to distribute rumours and conspiracies, and any message back can be dismissed by stating that the message should not be taken seriously. Additionally, the author notes that messages labelled as satire are increasingly becoming more hateful and polarising. Distinguishing satire from actual news content on social media may be challenging due to the absence of heuristics or mental shortcuts we use to make sense of the world around us. Whereas the layout of a newspaper reveals when an article is in the satire or opinion section, these visual cues are missing online and on social media. Even more so, online, certain satirical news websites have adopted the layout of traditional news sites, which makes it even harder for audiences to label these information sources as satirical. A well-known example of a satirical news site is "The Onion".
2. The second category concerns false connections: when headlines, visuals, or captions are not in line with the content of the message. This type of content is sometimes also referred to as clickbait content, where sensational language and visuals are used to initially attract audiences and to drive clicks, but then fall short once the reader reaches the site.
3. The third category concerns misleading content, where information is used in a misleading way to frame or portray an issue or individual in a certain way. Misleading content may manifest itself in various ways, for instance by reframing stories in headlines, using only fragments of quotes, or by manipulating the visualisation of statistics. As such, only the part of the story that aligns with a certain position is being told to support a certain argument.
4. The fourth category of problematic information concerns false context, which occurs when genuine content is shared with incorrect contextual information. In this case, truthful content has been reframed to fit a different, and often more dangerous, narrative.
5. The fifth category relates to imposter content, which occurs when genuine sources of information are being impersonated. This may for instance be the case when false content uses logos of well-known, established organisations, such as NGOs or news organisations. One technique is the creation of websites that look like professional news sites, but that only share false information. Distributors of imposter content may also impersonate individual established figures or journalists on social media

platforms by setting up fake profiles. This strategy may be especially impactful, as the amounts of information on social media that users have to process are extremely large, and people may hence not always pay attention to the small details that give away that the account is impersonating someone else.

6. The sixth category concerns manipulated content, which is the case when genuine information or visual materials are manipulated with the intent to deceive the audience. This strategy relates mostly to altering photos and videos to communicate a different story or a different angle to the story than was originally the case.
7. Lastly, the seventh category relates to fabricated content. Fabricated content is newly produced content that is completely false and designed with the intention to deceive and to cause harm. Producers of fabricated content may make up news stories and produce pictures and videos to support their stories. The recent wave of pictures and videos generated using artificial intelligence also falls under the category of fabricated content.

As the above description demonstrates, information disorders in general and misinformation and disinformation in particular are complex phenomena. Despite this complexity, in various publications these phenomena are often denoted with the term “fake news”, which is generally understood as fabricated news messages that are verifiably false, and that have no factual basis. Recently, the term “fake news” has increasingly been contested by scholars and experts in the field of information disorders for its vagueness and inability to distinguish between the different types of information disorder, as it instead seems to span various phenomena under the umbrella of information disorder ranging from unbalanced information to completely made-up conspiracy theories. Additionally, fake news has become a highly political term and a rhetorical tool used by politicians to discredit mainstream news media and to attack journalists that have reported critically about them.

1.4 Causes of belief in false information

The theory of behaviourism

Behaviourism is a psychological theory that focuses on observable behaviours and emphasises the role of the environment in shaping and determining behaviour. It suggests that all behaviours, including cognitive processes and beliefs, can be explained by external stimuli and the individual's response to those stimuli.

According to behaviourism, beliefs are acquired through a process of conditioning, primarily through reinforcement and punishment. The development of beliefs is influenced by the individual's interactions with the environment and the consequences of their actions. When certain behaviours are reinforced or rewarded, individuals are more likely to develop corresponding beliefs. It is important to note that behaviourism has been critiqued for its limited focus on external factors and its neglect of internal mental processes, such as thoughts, emotions, and subjective experiences. While behaviourism provides insights into the influence of the environment on beliefs, it does not fully account for the complexity of human cognition and the role of internal factors in belief formation.

Other psychological theories, such as cognitive psychology and social cognitive theory, offer a more comprehensive understanding of belief formation by considering **cognitive processes, social influences, and individual experiences in addition to external stimuli**. These theories recognise that beliefs are shaped through a combination of environmental factors, cognitive processes, and personal experiences.

Social influence

With social influence we refer to the process by which individuals or groups affect the thoughts, feelings, attitudes, and behaviours of others. It encompasses the various ways in which people are influenced by the presence, actions, or opinions of others within their social environment. Social influence can occur through direct or indirect interactions and can be **intentional or unintentional**.

There are several forms of social influence that have been widely studied. **Conformity** refers to the tendency of individuals to adjust their thoughts, beliefs, and behaviours to match those of a majority or influential group. People often conform to social norms or expectations to gain acceptance, avoid conflict, or seek approval from others.

Compliance refers to the act of changing one's behaviour in direct response to a request or command from another person or group. It commonly occurs in situations where there is a perceived authority figure or when people want to avoid negative consequences or gain

rewards. Similar to compliance is obedience, only that involves following the orders or instructions of an authority figure, typically in hierarchical situations. Obedience may occur even when the requested actions contradict an individual's personal beliefs or values.

The very next form is **persuasion**. It involves attempts to change a person's attitudes, beliefs, or behaviours through communication and argumentation. Persuasive techniques can include logical reasoning, emotional appeals, credible sources, and social influence tactics such as social proof (e.g., testimonials) or scarcity (e.g., limited-time offers).

When the presence of others enhances an individual's performance on simple or well-rehearsed tasks occurs **social facilitation**. The mere presence of others can increase arousal and motivation, leading to improved performance.

Social loafing is the tendency for individuals to exert less effort when working as part of a group compared to when working individually. This phenomenon occurs when individuals feel that their contributions are less identifiable or when they perceive their efforts as less necessary due to the presence of others. It is a result of diminished personal accountability in a collective setting. Another related phenomenon that arises when group members prioritise harmony and consensus over critical thinking and independent decision-making is known as **groupthink**, which can lead to flawed decision-making and the suppression of dissenting viewpoints or alternative viewpoints within the group.

Social influence plays a significant role in various aspects of human behaviour, including conformity to societal norms, political attitudes, group dynamics, and public opinion formation. Researchers have extensively studied social influence to better understand the mechanisms behind it and its **effects on individuals and societies**.

Believing in false information

Belief in false information is a widespread occurrence influenced by various factors. It is important to be aware of such factors and strive for **critical thinking, skepticism, and the use of reliable sources** when evaluating information. By developing media literacy skills and fact-checking information before accepting it as true, individuals can minimize the impact of false information on their personal beliefs and decision-making processes.

People may believe in false information for several reasons: Let us take a closer look at a few of them:

- **Lack of credible sources:** If individuals rely on unreliable or biased sources of information, they are more likely to encounter false or misleading information. It is essential to verify the credibility of sources before accepting the information as true.

- **Confirmation bias:** People often seek out information that confirms their pre-existing beliefs or opinions. This tendency can lead to the acceptance of false information that aligns with their worldview, while disregarding or dismissing contradictory evidence.
- **Cognitive shortcuts:** In some cases, people may use heuristics or mental shortcuts to process information quickly. While these shortcuts can be efficient, they can also lead to errors in judgment, causing individuals to accept false information without critically evaluating it.
- **Emotional reasoning:** Emotions can influence belief formation. When individuals have strong emotional attachments or biases, they may be more inclined to accept information that supports their emotional state, even if it is not accurate.
- **Social influence:** People are often influenced by their social environment, including friends, family, and social media networks. If false information is widely shared within a particular social group or online community, individuals may be more likely to adopt those beliefs without questioning their validity.
- **Limited knowledge or expertise:** Lack of knowledge or expertise in a particular subject can make individuals more susceptible to false information. Without the necessary background information or critical thinking skills, it becomes easier to accept misinformation as true.
- **Lack of media literacy:** Insufficient understanding of how to critically assess and evaluate information can contribute to the belief in false information. Without the necessary media literacy skills, individuals may struggle to distinguish reliable sources from unreliable ones.

Social media and continuous behaviour modification

Social media platforms have become an integral part of many people's lives and have a significant impact on human behaviour. These platforms utilise various techniques to engage users and encourage continuous interaction, often leading to behaviour modification.

We currently live in an era defined by technology and social media. These platforms have become the primary means through which we exchange thoughts, emotions, desires, and engage in interactions, often within virtual realms. As a result, the level of belief and trust has expanded and plays a significant role in shaping interpersonal relations, including important aspects of existing values and socially valid beliefs. The process unfolds seamlessly as many of us continually use various devices. Unbeknownst to us, we are constantly being tracked and monitored, with engineered feedback consistently provided. Gradually, we find ourselves subtly influenced and entranced by technicians whose identities remain concealed, their motives unclear. Algorithms voraciously consume extensive data about us, contributing to this intricate web of influence.

Social media exerts its influence on behaviour through the implementation of algorithms that curate and display content to users. These algorithms are specifically crafted to maximise user engagement by analysing individual preferences, behaviour patterns, and demographic information. As a result, users are often presented with content that aligns with their interests, keeping them engaged for longer periods. Social media platforms employ a range of **psychological techniques** to prompt specific behaviours among users. One such

technique involves the strategic use of notifications and alerts, which create a sense of urgency and drive individuals to frequently check their accounts.

All these measurements and many others have been matched up with similar readings about the lives of multitudes of other people through massive spying. Algorithms correlate what we do with what almost everyone else has done. The algorithms don't really understand us, but there is power in numbers, especially in large numbers. So-called advertisers (direct manipulators) can seize the moment when we are perfectly primed and then influence us with messages that have worked on other people who shared traits and situations with us. Now everyone who is on social media is getting individualised, continuously adjusted stimuli, which could be understood as continuous behaviour modification. The platforms also utilise features like likes, comments, and shares to create a sense of social validation, reinforcing certain behaviours such as seeking approval or validation from others.

Another aspect of behaviour modification on social media is the gamification of user interactions. Platforms often employ game-like elements such as badges, rewards, and leader boards to encourage users to engage more frequently and compete with others. These elements tap into the human desire for achievement and recognition, fostering addictive behaviour patterns.

Social media platforms leverage **persuasive design techniques** to influence user behaviour. They employ user interface design, micro-interactions, and personalised recommendations to nudge users towards specific actions.

It is important to note that social media platforms are not inherently malicious in their intent. They primarily aim to increase user engagement and provide personalised experiences. However, the continuous exposure to tailored content and behaviour modification techniques can potentially lead to negative consequences, such as addictive behaviour, decreased attention spans, and even the reinforcement of harmful beliefs or echo chambers.

As users, it is crucial to be aware of these behaviour modification techniques and actively manage our social media usage. This can involve setting limits on screen time, diversifying information sources, critically evaluating the content we consume, and being mindful of the potential effects on our behaviour and well-being.

Human needs and emotional bonding

Human activity attempts to meet our needs. These needs serve as motivating forces that push us to achieve our maximum potential. Basic needs are universal and apply to all individuals, regardless of the cultural, social, or economic environment in which a person resides. In addition to fundamental physiological needs such as water, food, and sleep, humans have a set of needs that are less evident but nonetheless essential to our wellbeing. These are psychological requirements, which, like physiological, are biological in nature. We all possess internal resources that enable us to continually strive for fulfilment and satisfaction.

Abraham Maslow developed the psychological theory that categorizes our needs into fundamental and higher levels.

According to Maslow's theory, if we do not satisfy the requirements at a lower level, we cannot satisfy those at a higher level. Only when the needs of a lower level are met do we sense the desire to meet the needs of a higher level. Today, the majority of psychologists concur that we can simultaneously meet a greater number of diverse requirements. An individual may be even more motivated by satisfying "lower" needs than "higher" needs.

Abraham Maslow Hierarchy:



In today's society, psychological requirements are frequently neglected, despite their importance to our well-being. And if they go unmet for an extended period of time, they can lead to anxiety, melancholy, dependence, and addiction. It is essential that we endeavour to meet their needs.

These psychological needs are:

1. The need to give and receive affection;
2. The need for purpose, goals and meaning;
3. The need for belonging and community;

4. The need for challenge, creativity;
5. The need for intimacy;
6. The need to control the situation;
7. The need for position and status;
8. The need for security.

The prevalent use of social media in today's society has influenced the way interpersonal relationships are formed and sustained. Often, these digital platforms serve not only as means for social connections but also as avenues for emotional bonding. This phenomenon is increasingly evident across various media platforms, where they hold significant influence over our values, beliefs, and desires. Without engaging in introspection and critical thinking, we become susceptible to **emotional manipulation** through these channels. Therefore, it is essential to develop an understanding of our emotional needs and how they can be exploited, leading to emotional hijacking.

What are Emotional needs?

Emotional needs are feelings or emotions we need to feel at peace, happy, and content. Without meeting our emotional needs, we feel frustrated, unhappy, and dissatisfied. Emotional needs examples can be feeling appreciated, feeling safe, feeling a sense of belonging, etc. Humans thrive on emotional and social support. We seek emotional sustenance as much as we seek physical sustenance. We all have emotional needs that we need meeting and each of us has a different set of needs. Here, our emotional needs may depend on our childhood experiences, our personalities, our identity, and other factors that make up our individuality.

Below we set some basic emotional needs, which are the basis of our emotional attachment, our emotional bonding:

1. **Affection:** One of the basic emotional needs is affection. Affection is needed to strengthen the bond.
2. **Acceptance:** We all need a social environment who accepts us. This need for acceptance can create a sense of belonging that we all need to thrive, e.g., asking for advice and support, sharing goals for the future, planning activities together, etc.
3. **Security:** Security and feeling safe are some of the basic emotional supports that we need to meet, e.g., feeling safe to share emotions, knowing that you are supported, etc. Here it is important to emphasise that **setting boundaries** can enhance your sense of safety and security. This way you know what you need and that there are some lines the others cannot cross with you.
4. **Autonomy:** When our social relationships grow, we grow with them. We often begin sharing interests, hobbies, and other activities. And while it may be important to share and grow into a unit, it is important to maintain a sense of self. Don't forget, you're a separate individual with a different personality. Having autonomy is an

important emotional need that should not be ignored. If you feel you're losing your sense of self and identity, take a step back.

5. **Validation:** We all need to be heard and validated. If your concerns are left invalidated and dismissed, it can turn into resentment.
6. **Trust:** Trust and security are two emotional needs that are closely linked with each other. Meeting this emotional need is one of the most important aspects of our emotional needs.

Equally essential as meeting our basic physical and psychological needs is meeting our **emotional needs**. Unbeknownst to us, compassion, empathy, affection, connection, and acceptance are necessary for us to feel alive and complete.

Emotional bonding and social media particularly play an interesting role in today's society. The advancement of technology and the widespread use of media platforms have significantly influenced the way people form and maintain emotional connections.

But being emotionally bonded to social media can also have several negative consequences. Spending excessive time on social media can lead to feelings of anxiety, depression, and loneliness. Constantly comparing oneself to others and seeking validation through likes and comments can negatively impact self-esteem and overall mental health. Paradoxically, spending too much time on social media can lead to social isolation in real life. Focusing on virtual interactions can reduce face-to-face interactions and meaningful connections with friends, family, and the community.

Social media platforms often present an idealized version of people's lives, highlighting the exciting and positive aspects. This can trigger a fear of missing out, leading individuals to constantly check their feeds to stay updated, which can cause stress and dissatisfaction. They tend to showcase the best moments and highlights of people's lives, creating a distorted perception of reality. Constant exposure to carefully curated images and posts can lead to unrealistic expectations and dissatisfaction with one's own life.

Emotional bonding can indeed play a significant role in **making people believe in disinformation or misinformation** as well. Humans are social beings, and our beliefs, values, attitudes, and needs are often shaped by our connections with others. When we form emotional bonds with certain individuals or groups, we tend to trust and accept their viewpoints more readily.

Mis- and disinformation can be designed to evoke strong emotional responses, such as fear, anger, or excitement. These emotional triggers make the information more memorable and persuasive, and they can override critical thinking and rational evaluation of the news.

In this way emotional bonding can create a sense of identity and belonging within a particular community or ideology. People may be more likely to accept and share information that aligns with their group's beliefs, even if it lacks evidence or is false. This group cohesion can lead to the spread of misinformation within closed echo chambers, reinforcing false narratives and further strengthening emotional bonds.

To address the issue of emotional bonding and belief in misinformation, it is crucial to promote critical thinking skills, media literacy, and fact-checking practices. Encouraging individuals to question information, evaluate multiple sources, and consider alternative viewpoints can help counteract the influence of emotional biases. Fostering open dialogue and respectful discussions can create opportunities for people to challenge their own beliefs and engage with different perspectives.

1.5 How does mis- and disinformation work?

The proliferation of mis- and disinformation

As a result of the tendency of people to make mistakes and occasionally lie, misinformation, defined as any information that is ultimately proven to be incorrect, presents an unavoidable difficulty in our quest for accurate knowledge and effective communication. However, this is not enough to account for the twenty-first century's foremost problem: the proliferation of false information and the havoc it wreaks on people's ability to remember and make sound decisions. Elections, referenda, political and religious persecution, and the international reaction to the COVID-19 epidemic have all been linked to the spread of false information.

Modern technological advancements are essential to understanding the psychology and background of propaganda. Roman emperors rose to power with the use of propaganda spread through coins with hidden messages, while Nazi Germany's propaganda machine relied largely on the written press, radio, and film to reach the masses. Today's disinformation efforts have unprecedented reach primarily due to the widespread use of the internet. The internet has a vast audience and allows persuasive messages to be crafted according to each user's unique personality type. Moreover, when communication contexts favour confirmation of past opinions (so-called echo chambers, see chapter 1.6), users' exposure to material that contradicts their worldviews can be limited. Although the effects of echo chambers on people's views and actions have been the subject of some debate, the internet provides a perfect medium for the rapid dissemination of misinformation at the expense of truth.

To combat disinformation, the field of science communication has traditionally used the "information deficit model," which places the emphasis on people's ignorance rather than on the availability of alternative viewpoints. Therefore, the effect of false information can be mitigated by providing a clear and concise explanation of the relevant facts. However, the cognitive, social, and affective determinants of attitude formation and truth assessment are disregarded by the information deficit approach. Some people, for instance, ignore the widespread scientific agreement that climate change is real or refuse to get vaccinated even if they know the risks. Factors such as conspiracy thinking, anxieties, identity expression, and motivated reasoning (reasoning based more on one's own personal or moral beliefs than on objective evidence) contribute to this rejection of science beyond simple ignorance. Therefore, it is crucial to think about the cognitive architecture and social environment of individual decision makers to comprehend the psychology of disinformation and how it might be addressed.

Drivers of false beliefs

Incorrect information is very important for the development of incorrect beliefs. The creation of untrue concepts is influenced by a number of cognitive, social, and affective factors; nevertheless, a lack of access to high-quality information is not necessarily the primary precursor. In most cases, the same processes that produce true beliefs can also produce false ones. People have a tendency to be predisposed to accept the veracity of information, and to rely on their intuitions and "gut" reactions rather than deliberation when making decisions.

Conspiracy theories concerning the virus's origin have certainly been presented to the public more than once, and this exposure may have led to the popular perception that they are true. The strength of peripheral cues like familiarity (a signal that a message has been encountered before), processing fluency (a signal that a message is either encoded or retrieved effortlessly), and cohesion (a signal that the elements of a message have references in memory that are internally consistent) as signals for truth increases with repetition, giving rise to the illusory truth effect. Thus, both falsehoods and verified knowledge benefit from being repeated. Months after initial exposure, illusory truths might linger, unaffected by cognitive capacity or the presence of conflicting counsel from a reliable source or past knowledge. One could also take the 'shortcut' of simply accepting one's own preconceived notions as being correct. When news headlines are consistent with a reader's perspective, they are more likely to be trusted. Partisan bias can also lead to embellished recollections of political scandals. It's true that one's worldview can have an effect on one's ability to spot mis- or disinformation headlines, but intuitive (or "lazy") thinking can also play a role.

Similarly, giving people time to think things through can help them make better decisions. Belief in false news, but not real news, is diminished if initial impressions may be revised after further consideration. Similarly, teaching people to "think like fact checkers" motivates them to use their own expertise rather than assumptions.

Beliefs are shaped in part by the source of knowledge because of the social cues it conveys. In general, people are more likely to believe and be persuaded by a message if they believe that it came from a reliable source. When people view a human information source as attractive, powerful, and relatable, they are more likely to trust what they have to say. People are more likely to trust the opinions of those in their social group than those outside their group, give equal weight to all opinions regardless of the speaker's expertise, and mistakenly assume that their beliefs are widely shared when there is actually only a small degree of overlap. Since many people put their faith in experts and political elites, and since they have the ability to alter public opinions, it can do significant damage when leaders make incorrect claims.

Furthermore, indications of the credibility of a source of information are frequently missed, ignored, forgotten, or confused.

False beliefs can also be influenced by the emotional tone of the information being disseminated. Emotional appeals are commonly seen in misleading content that is frequently shared ('virally') on the internet.

For some reason, while trying to convince someone of something, people automatically switch to more emotive language because they know it works better. When used effectively, emotion can sway audiences by diverting their attention away from other, possibly more diagnostic signs, like the reliability of the source.

One's emotional state can also impact one's ability to draw conclusions from information. Encouragement to 'rely on your emotions' makes people more open to disinformation since they are being led to believe that their feelings are reliable sources of knowledge. Similarly, being in a very optimistic frame of mind, for example, can make one more susceptible to trickery and the illusion of truth. Sadness, then, may serve a useful purpose by making people less trusting. Misinformation that agrees with one's political beliefs, as well as COVID-19-related misinformation, are both bolstered by anger. Finally, being socially isolated, which tends to bring up a negative mood, can heighten one's sensitivity to conspiratorial material.

Obstacles to rethinking a belief

The information deficit theory assumes, implicitly, that incorrect beliefs can be dispelled once the correct information is made available. However, even after being given a correction and accepting it as real, erroneous information can still have an impact on people's beliefs. The term "continued influence effect" (CIE) describes this enduring impact. Even after being corrected, erroneous information can affect consumers' willingness to pay for a product or share a post on social media.

Strategies for correcting false information

Interventions to counteract disinformation need to get through mental, interpersonal, and emotional roadblocks. The majority of corrections are factual arguments, which address the errors in the original post and replace them with the proper information. The logical inconsistencies that are characteristic of certain forms of misinformation can also be countered; for instance, by providing replies that point out the obvious contradictions between claims like "global temperature cannot be measured accurately" and "temperature records show it has been cooling." Such logical fixes could provide broader defence against disinformation campaigns that employ the same logical flaws and deceptive strategies. A third method is to discredit the material's source or make the false information seem less plausible. Correcting false information can involve a combination of strategies, such as pointing out the fallacies in the argument as well as the mistakes in the information itself. In

a broader sense, one might differentiate between proactive (prebunking) and reactive (debunking) techniques. The goal of prebunking is to equip people with the tools they need to spot and reject new forms of disinformation when they encounter them. The focus of debunking is on opposing individual incorrect claims after they have been brought to light.

Implications for practitioners

There are many choices to be made about the best strategy for countering disinformation. Countering false information requires first determining the sources and origins of false formation. Traditional news outlets can disseminate disinformation through opinion pieces, paid content, or uncritical repeating of claims by politicians, despite social media's prominence as a misinformation vector. Professionals need to be able to pre-disprove or quickly debunk common themes of disinformation by having viable alternative stories prepared. Coalitions are frequently formed by organisations such as the International Fact-Checking Network and the World Health Organisation to achieve this goal. Practitioners need to realise that simple retractions won't be enough to reduce the impacts of false information, and that interventions typically lose their efficacy over time. Therefore, practitioners should be ready to take action multiple times. The ability to tell compelling stories supported by evidence is crucial for effective redress. Anecdotes and stories can be deceptive, but a narrative structure is not required. The ability to tell the difference between fact and opinion is also a skill that can be taught. More visible labelling may encourage readers to change their comprehension and interpretation of articles accordingly, despite the fact that most news consumers do not notice or understand content labels forewarning that a piece is news, opinion, or advertisement. Labelling, for instance, can make readers suspicious of sponsored material. Warnings are helpful, but they are not fool proof in preventing the content from having an effect. If preventative measures fail, practitioners should switch to a reactive strategy. However, not all errors in information should be addressed. Due to resource constraints and opportunity costs, efforts to remedy harmful disinformation should prioritise targeting its widespread dissemination. Those who were unaware of the erroneous information before hearing the correction are unlikely to adopt it after hearing it. However, if the potential for harm is low, there is no need to disprove false information that few people are aware of, as this could bring the source into greater public view.

Implications for information consumers

The dissemination of false information can be slowed down or stopped if information users refrain from sharing false stories with others. For example, audiences need to know that they may come across not only relatively harmless misinformation like reporting errors, obsolete material, and satire, but also disinformation efforts that aim to sow doubt, discredit persons, and cause conflict. Subsequently, it is important for the public to understand that

disinformation campaigns can employ psychological manipulation by manipulating social media algorithms and selling users' private information through data brokers, which further manipulates these algorithms. Imprudent dissemination of information may increase the likelihood that others will be misled. By spreading false information, you may be helping those who create it earn the financial benefits they want, while also widening the ideological chasms that keep people from voting, incite violence, and undermine democracies.

Therefore, while engrossed in content, individuals should pause, consider their motivations, and investigate their emotional reaction. Using lateral reading skills, paying close attention to the source and thinking about the source's legitimacy and motivation might help readers spot false material more easily. Everyone should be encouraged to politely, deliberately, and thoughtfully correct online misinformation where they meet it (unless they judge it to be harmless fringe position), given the benefits of influencing observers through observational correction. All these suggestions are cornerstones of media literacy as well. Indeed, one fundamental principle of media literacy is that it safeguards individuals from the negative impacts of media exposure, such as the temptation to adopt particular beliefs or actions, by allowing them to comprehend the goals of media.

1.6 Choice, use and abuse of words in information

Choosing words matters

Communication relies on words, and words play an essential role in the information domain in how we make sense of the world. Word choice, usage, and abuse may have a major effect on how people understand the messages conveyed in anything from news stories and scientific papers to social media postings and advertising efforts.

It takes skill to express meaning through language. Skilled communicators are aware that their word choices have the power to affect the reader's feelings and understanding. A catchy title may do anything from catch the reader's interest to influence their views. Similarly, if you use vivid and detailed language, you may create an image in the reader's head, which will help them better understand and remember the content.

But remember, with authority comes duty. Word choice is important, because its overuse or abuse can undermine the reliability of the data being presented. Misleading or sensationalist language is a frequent method of mistreatment. To attract readers and viewers in today's age of clickbait headlines and "fake news," sensationalism is frequently employed. Such attention-grabbing headlines frequently mislead and confuse readers because of their exaggeration or distortion of the truth.

Euphemisms and doublespeak are another component of language choice that can lead to mistreatment. These strategies are frequently used by governments, businesses, and even private people to mitigate the effects of unfavourable information or to influence public opinion. Euphemisms are used to soften the blow of unpleasant realities in order to make them more digestible or socially acceptable. The deliberate manipulation of language has the potential to obstruct open communication and undermine trust.

Wordplay errors may manifest themselves in the intentional dissemination of false information or propaganda. Today, because of the reach of the internet and social media, misinformation may travel at the speed of light. Individuals and groups can influence public opinion, create discord, and discredit trustworthy sources of information via the purposeful use of misleading language, biased narratives, and blatant falsehoods.

Both readers and writers have a part to play in stopping the misuse of language in the media. All professionals in the fields of journalism, literature, science, and education have a responsibility to safeguard the veracity of their work. These information producers may help build a more informed society if they follow professional norms, verify their sources, and preserve neutrality.

For example, the conventional meaning of declarative and interrogative utterances is linked to the illocutionary forces of the message and the request for information, which means that what someone says has the effect of an action, for example giving an order or making a

promise. Imperative tenses are often related with the meaning of enticement, they persuade to do something by offering something pleasant. Using language forms to show illocution forces that have nothing to do with their straight verbal meaning is an indirect way to get your message across. The speaker's true intentions are not made clear while using indirect forms.

Why do our brains believe lies?

The human brain is an amazing organ with the capacity for sophisticated thought, memory, and choice-making. However, it is not 100% accurate. Our ability to think critically doesn't always protect us from falling for deception. A better understanding of the causes of this phenomenon might help us better appreciate the complexity and fragility of human thought.

Cognitive biases are a major contributor to how easily our minds are fooled into accepting false information. We use these biases, also known as mental shortcuts or heuristics, to make snap decisions and assessments in our daily lives. While helpful in many contexts, they might cloud our judgement when we need to evaluate information objectively. Examples of this kind of prejudice include confirmation bias, which leads people to look for and prioritise information that supports their previous ideas while ignoring or discarding evidence to the contrary. Due to the echo chamber effect caused by confirmation bias, we have a hard time accepting information or ideas that will counter our preconceived notions of the world.

Our emotional reaction to information is another component that makes us susceptible to believing falsehoods. When making a choice, one's emotions often win out over one's logic. When faced with highly charged material, our brains may forego logic in favour of an immediate, intuitive response. As a result, we may be more easily swayed by those who play on our emotions by appealing to our fear, rage, or other powerful feelings.

Our minds also have an inclination to fill in the blanks and make up stories where there are none. This might cause faulty recall or the adoption of explanations that sound reasonable but are actually wrong. Our tendency to look for patterns and connections in the environment, which might lead us misguided when faced with ambiguity or missing data.

It's also important to consider the role of society. As social creatures, we allow the opinions and actions of people around us to shape our own. The inclination to question or critically assess information can be influenced by groupthink, social conformity, and the need for social approval. If a falsehood is consistent with the ideas of our social groups or is supported by people we respect and like, we are more likely to accept it. As a result, misinformation is more likely to be believed, remembered and later recalled — even after we learn that it was false.

In addition, the proliferation of digital media and the speed with which information can flow via social networks have made it easier for lies and misconceptions to propagate.

Information overload, coupled with personalisation algorithms, can lead to the construction of "filter bubbles" and "echo chambers" that only serve to strengthen one's pre-existing worldview. Overwhelmed with data, it may be hard to tell fact from fiction, increasing the probability that people would believe and spread misinformation. The more we see something repeated, the more likely we are to believe it to be true. This "illusory truth effect" arises because we use familiarity and ease of understanding as shorthand for truth; the more something is repeated, the more familiar and fluent it feels whether it is misinformation or fact. Further explanations on filter bubbles and echo chambers will be provided later in the guidelines.

So, how do we reduce the temptation to believe false information? Realisation is the starting point. By being aware of our own cognitive and emotional weaknesses, we may better evaluate information. It's important to be open to new ideas and to be willing to change our minds when presented with convincing evidence. Debunking or showing that something is not true is not enough to combat misinformation — we also need to be proactive by "prebunking," which essentially means preparing our brain to recognize misinformation before we encounter it. Much like the way a vaccine primes your immune system to battle a foreign invader, prebunking can inoculate and strengthen your psychological immune system against viral misinformation.

The hypothesis of linguistic determinism

The ability to communicate and share ideas through language is essential to being human. It moulds our ideas, directs our relationships, and enables us to transmit significance. The Sapir-Whorf hypothesis, or the idea of linguistic determinism, suggests that a language's speakers' thought and perception are shaped by the language's structure, vocabulary, and grammatical patterns. This theory proposes that people are restricted to the thoughts and ideas that their language permits them to express because various languages give distinct conceptual frameworks. What this means is that our ability to observe and make sense of the world around us is constrained and shaped by the structure of the language we use.

There are discrepancies in the categorisation and description of the universe between languages, and hence between the ways in which their speakers see and comprehend diverse situations.

Some languages may have a more complex vocabulary for colours, allowing speakers to more easily differentiate between nuances and colours, as one example. Likewise, more than a dozen distinct terms for snow are used in Alpine areas. The impact of grammatical structures on cognitive processes is another topic of research within linguistic determinism. For example, the speakers of some languages are typically required to indicate the gender of nouns in a phrase, whereas speakers of others may not. This grammatical difference may affect how native speakers of those languages classify and label things, giving those gendered qualities and connotations. Another example: In addition to single and plural,

Slovenian grammar also uses the "dual", with distinct endings depending on the number of individuals being discussed.

Critics of linguistic determinism contend that language is not the only factor in shaping how people think and feel. They imply that elements beyond genetics and environment have a role in shaping our minds and behaviour. It's also worth noting that the determinism theory in linguistics doesn't suggest that language has a monopoly on mind or limits our creative potential. Instead, it implies that language exerts considerable influence over our thought processes and the way we see the world.

Ambiguity

There are several ways in which ambiguous communication poses a threat. Even when it's not meant to be, ambiguity might cause others to misunderstand or misapply what's been said.

Misunderstandings between people or groups can result from using ambiguous language or sending mixed messages. Confusion, disagreement, and a breakdown in efficient communication can result when the intended meaning of a message is misunderstood by its receivers. Inadequate or false information may also be transmitted due to ambiguity. It's easy to misinterpret a message or miss key points when key elements are muddy. This is especially troublesome in fields where factual accuracy is essential, such as medicine, emergency services, and the law.

Conflicts and misunderstandings can arise when words are left unsaid. Disputes and disagreements can arise when people with differing understandings of the same message insist they are right. Relationship problems, lower output, and difficulty working together are all possible outcomes. Individuals may not accept responsibility for their work or may fall short of expectations if they are unsure about their role, the outcomes expected of them, or how to achieve them. Because of this, productivity may drop, collaboration may break down, and other undesirable outcomes may occur.

Ambiguity may also have ethical and legal consequences. Legal fights and disagreements might result from, for instance, a contract or agreement that is too vague. Similarly, injury or unethical behaviour might come from ambiguity in communication on safety measures or ethical principles.

Diplomatic and negotiating situations are ideal places to skilfully employ ambiguity. By leaving certain things unsaid, negotiators create flexibility for manoeuvre and compromise. It enables the parties to negotiate delicate matters without taking unyielding stands, which may pave the way for compromise.

Suggestive ambiguity is a tactic that allows the speaker to convey what he wants while yet allowing his audience to draw whatever conclusions they please. The wide range of the speaker's words makes this feasible. Situational and interpersonal factors combine with the meaning of language statements to create an ambiguous setting where listeners can draw either positive or negative conclusions. In these settings, it's easier for speakers to subtly insert their own views, statements, accusations, calls to violence, etc.

Political speeches often use cryptic language and ambiguity to alter voters' attitudes and paint their opponents in a negative light. One could argue that this kind of ambiguity is used skilfully to resolve international problems by negotiating compromises that are acceptable to all parties involved. Sometimes the ambiguity becomes more pronounced because the context provides a plausible alternative interpretation. This is common when the people involved in an interaction have varying levels of prior knowledge.

All in all, ambiguity can cause a rift between the interpretation and the original meaning of a text, speech or article. Because of this rift, some people may disseminate their inaccurate interpretation of the information (information disorder). Ambiguity can be created on accident, leading to wrong interpretations and therefore increasing the probability for misinformation to originate, or can be purposefully utilised to craft a disinformation narrative among recipients of the ambiguous language.

Avoiding confusion and misinterpretation by being as specific and clear as possible is therefore essential. The dangers of ambiguity can be reduced by using plain language, giving precise directions, eliciting clarification when necessary, and checking that one's meaning has been expressed correctly.

Linguistic manipulation

Language is a powerful tool that humans use to communicate, express ideas, and shape our understanding of the world. However, language can also be manipulated and exploited for various purposes. Linguistic manipulation, the deliberate and strategic use of language to influence thoughts, beliefs, and behaviours, is a phenomenon that has been prevalent throughout history. The techniques of linguistic manipulation and their impact on individuals and society are displayed below.

The techniques of linguistic manipulation:

1. **Loaded language:** The use of emotionally charged words and phrases to sway opinions and evoke specific reactions. This technique aims to elicit strong emotional responses from individuals, clouding rational thinking and promoting biased interpretations. *Example: "Illegal aliens" versus "undocumented immigrants": The use of the term "illegal aliens" carries a negative connotation, suggesting criminality and otherness.*

2. **Euphemisms:** The substitution of negative or harsh terms for neutral or positive ones. Euphemisms are employed to soften the impact of certain words or concepts, making them more palatable or less threatening. They can manipulate perceptions and influence how individuals perceive and respond to certain ideas or actions. *Example: "Downsizing" instead of "layoffs".*
3. **Doublespeak:** The use of language to deliberately obscure or distort meaning, often employed by politicians or organisations. Doublespeak can involve deliberate ambiguity, excessive complexity, or the use of jargon to confuse or mislead people while maintaining an appearance of credibility. *Example: "Enhanced interrogation techniques" instead of "torture."*
4. **Framing:** The strategic selection and presentation of information to shape perceptions and influence interpretations. By emphasising certain aspects of an issue while downplaying or omitting others, framing can guide individuals' understanding and support specific viewpoints. *Example: "Protecting the environment" versus "restricting economic growth." One side may frame an issue as "protecting the environment," emphasising the positive aspects, while the opposing side frames it as "restricting economic growth," emphasising the potential negative consequences.*
5. **False dichotomies:** Presenting a complex issue as having only two opposing options, forcing individuals to choose between them. This technique limits critical thinking and promotes a polarised perspective, disregarding nuances and alternative viewpoints. *Example: "You're either with us or against us."*
6. **Slogans and catchphrases:** Memorable phrases or slogans that are repetitively used to shape public opinion and reinforce particular beliefs. They simplify complex ideas into easily digestible sound bites, appealing to emotions and creating a sense of identity or loyalty. *Example: "Make America Great Again."*

1.7 Echo chambers and the amplification of disinformation

Earlier in this chapter, the term “echo chamber” has been used. In this subchapter we dive deeper into what an echo chamber is, how they originate and why they are important when talking about mis- and disinformation.

Significant changes have occurred in the previous twenty years in the amplification of misinformation, mostly driven by technological developments and the growth of social media platforms. During this time, information disorder has spread at an alarming rate. The relatively fast propagation of false information, and the belief in it, has been aided by the advent and extensive use of social media sites, both on mainstream platforms like Facebook and Tiktok and alternative platforms like 4chan and 8kun. Due to the open nature of these networks, fake information and stories may spread rapidly around the globe. In order to maximise engagement and shares, social media platforms' algorithms tend to encourage contentious or spectacular topics. And because people like consume and spread information that confirms their own opinions (confirmation bias), echo chambers have begun to emerge online. In these closed-off communities, false information may spread rapidly without being critically viewed or corrected. Furthermore, disinformation may also grow to become even more false, harmful and more skewed from reality. This happens through echo chambers and the funneling effect of social media algorithms. More on social media algorithms will be explained later in the guidelines under the theme “*technology & tools*”.

The term “echo chamber” is used to describe a situation in which people are only exposed to data, ideas, and perspectives which support their pre-existing worldview. The people in these echo chambers tend to reinforce and amplify each other's opinions, with little to no interaction with opposing opinions. Therefore, they most often ignore or discard anything that challenges this worldview. This positive feedback loop might provide the impression of agreement but actually stifle the pursuit of new perspectives.

The name “echo chamber” comes from an acoustic echo chamber, which is an enclosed, hollow space which reverberates sounds. This is a great metaphor for what is observed in these opinion echo chambers: the similar-minded individuals reverberate their own opinions and ideas in their own, segregated area without any “noise pollution” from the outside (read: differing opinions).

This environment is ideal for disinformation and extreme worldviews to prosper. Confirmation bias, or the inclination to look for and accept information that supports pre-existing opinions, is amplified in echo chambers. People are more inclined to accept and spread information without question when they are in the company of those who share their perspective and when they are exposed to content that supports that worldview. In echo chambers, people opt to only hear and see information that confirms their own opinions. By just hearing what one already agrees with, the information environment is constrained, giving deception a better chance to spread uncontrolled. Disinformation may spread, be debated, and be

reinforced within echo chambers where people with similar prejudices congregate. Misinformation builds legitimacy and gets harder to debunk when individuals share and spread misleading narratives with one another.

Because of the lack of interaction with opposing opinions and ideas, the echos are likely to be exaggerated and will distort into more extreme opinions that are further away from reality. This is because people are more inclined to accept and spread information without question when they are in the company of those who share their perspective and when they are exposed to content that supports that worldview. The opinions of the individuals in the echo chamber are amplified and transformed into views that are most likely a false depiction of the real world. These warped ideas could then be disseminated to spaces beyond these echo chambers, as the people in the echo chambers are prone to replicate the distorted ideas that have been created there. This is one of the ways mis- and disinformation is created. How these amplified ideas are disseminated outside of these echo chambers will be explained in *chapter 3: technology & tools*.

As echo chambers play a large role in the spreading of information disorder, they also play a prominent role in online radicalisation. One of the mechanisms in the radicalisation process is echoing, which refers to the way constant interaction with others holding the same extreme ideas and beliefs can shape and reinforce a person's own convictions, potentially even legitimising violence. The "echo chambers" that can form online contribute to the confirmation of people's beliefs, pushing them towards more radical thinking and actions, and fostering increased distrust of mainstream news. Furthermore, within these echo chambers, extremist ideologies become normalized, making it difficult for individuals to oppose them. This can result in the exclusion of members who attempt to introduce nuance. Importantly, algorithms used by social media platforms can also contribute to the escalation of increasingly extremist ideologies.

It is important to encourage people to check sources before sharing information. Educating the public about reliable fact-checking organisations and resources equips them to evaluate the veracity of material before sharing it. Civil discourse and open debate across ideological lines must be encouraged to break down barriers, dismantle echo chambers, and foster mutual understanding. The inclination to withdraw into echo chambers can be mitigated by cultivating an atmosphere where varied opinions are appreciated.

Social media platforms are crucial in combating the spread of false information. The influence of echo chambers on the propagation of disinformation can be reduced by stricter content control, algorithm transparency, and responsible recommendation systems.

1.8 Cognitive dissonance

As previously explained, our contemporary society grapples with a constant barrage of information. As we navigate through this labyrinth of information, we encounter cognitive dissonance: a psychological phenomenon that arises when our beliefs and attitudes clash with contradictory evidence or when we encounter conflicting viewpoints.

This subchapter delves into the intriguing relationship between cognitive dissonance and the pervasive spread of misinformation and disinformation. We explore how this internal struggle can inadvertently lead individuals to succumb to the allure of false narratives, inadvertently becoming victims or agents of deceitful information campaigns. By understanding the complexities of cognitive dissonance in the context of information disorder, we gain critical insights into the human susceptibility to manipulation, enabling us to fortify our minds against the tide of falsehoods in the digital landscape.

History

Leon Festinger (1919 – 1989) was the first to propose the theory of cognitive dissonance, which focuses on how individuals strive for internal consistency. He suggested that individuals have an innate desire to maintain consistency between their beliefs and actions. Inconsistent or contradictory beliefs result in discord, which individuals endeavour to avoid.

His theory was based on a participant observation study of a cult that believed the earth was going to be destroyed by a flood and what happened to its members — especially the most devoted members who had given up their homes and employment to work for the cult — when the flood did not occur. Committed members were more likely to reinterpret the evidence to show that they were right the entire time (the earth was not destroyed due to the cult members' fidelity).

According to his theory, we have an innate desire to maintain harmony in our attitudes and actions and avoid dissonance (or dissonance). This is known as the cognitive consistency principle. When attitudes or actions are inconsistent (dissonant), something must be altered to eradicate the dissonance.

What is cognitive dissonance?

Cognitive dissonance is the mental distress caused by holding two beliefs, values, or attitudes that are in conflict. This conflict causes unpleasant feelings of disquiet or discomfort because people tend to seek consistency in their attitudes and perceptions. The discrepancy between what people believe and how they act motivates them to take actions that will

alleviate their distress. People try to alleviate this tension in various ways, including by rejecting, explaining away, or avoiding new information. Cognitive dissonance can be caused by feeling compelled to do something, acquiring new knowledge, or deciding between two similar options.

Cognitive dissonance can cause unease and discomfort in individuals. This is especially true if the discrepancy between their beliefs and actions involves a core aspect of their **sense of self**.

For example, behaving in ways that are not aligned with your personal values may result in intense feelings of discomfort. Your behaviour contradicts not just the beliefs you have about the world, but also the beliefs that you have about yourself.

This discomfort can manifest itself in a variety of ways. Someone with cognitive dissonance may feel:

- Anxiety
- Embarrassment
- Regret
- Sadness
- Shame
- Stress

Cognitive dissonance can even influence how people feel about and view themselves, leading to negative feelings of self-esteem and self-worth.

The causes of cognitive dissonance

Cognitive dissonance is experienced by everyone to some degree, but it is not always simple to identify. Some indications that your emotions may be related to dissonance include:

1. Feeling uneasy prior to doing something or making a decision.
2. Attempting to justify or rationalise a decision or action taken.
3. Feeling embarrassed or ashamed about something you've done and trying to hide it from others.
4. Feeling guilt or regret about something you've done in the past.
5. Doing things because of social pressure or a fear of missing out (FOMO), even if you didn't want to do them.

There are numerous situations that can generate inconsistencies that result in cognitive dissonance.

Forced Compliance: Due to external expectations at work, school, or in a social setting, you may sometimes find yourself engaging in behaviours that are contrary to your own beliefs. This may involve conforming to peer pressure or doing something to avoid termination from a job.

Decisions: People make decisions every day, both large and minor. Because both options are equally enticing, we are frequently left with feelings of dissonance when confronted with two similar options.

Once a decision has been made, however, people must find a method to alleviate this discomfort. We achieve this by demonstrating why our selection was the best option, so that we can have confidence that we made the correct decision.

New Information: Sometimes acquiring new knowledge can result in cognitive dissonance. For instance, if you indulge in a behaviour that you later discover is harmful, you may experience discomfort. This discomfort can be especially pronounced when the new information conflicts with deeply-held convictions or beliefs that are central to one's identity. People often respond to this by attempting to justify their actions or by discrediting or ignoring new information, or by seeking out information that aligns with their pre-existing beliefs (confirmation bias).

In the context of mis- and disinformation, this tendency to seek cognitive consonance can be particularly problematic. Misinformation often exploits these cognitive processes, as it can be designed to align with pre-existing beliefs or tap into emotionally charged narratives. This makes it more likely for individuals to accept and spread mis- and disinformation, as it provides a convenient solution to the discomfort caused by conflicting information.

Cognitive dissonance resolution

Dissonance can be reduced in one of three ways: changing existing beliefs, adding new beliefs, and/or reducing the importance of the beliefs. When there are conflicts between cognitions (thoughts, beliefs, and opinions), individuals will take measures to reduce dissonance and distress in these ways:

1. **Acquire new information to outweigh dissonant beliefs.** For example: people who learn that greenhouse emissions result in global warming might experience feelings of dissonance if they drive a gas-guzzling vehicle. To reduce this cognitive dissonance, they may search out new information that contradicts the notion that greenhouse gas emissions contribute to global warming.
2. **Reduce the importance of the cognition:** Increasing the attractiveness of the selected alternative and decreasing the attractiveness of the rejected alternative is a common method for reducing cognitive dissonance. This is referred to as “spreading apart the alternatives.” A person could convince themselves that it is better to “live for today” than to “save for tomorrow.” In this way, he would be decreasing the importance of dissonant cognition.
3. **Change existing beliefs:** Change one or more attitudes, behaviours, beliefs, etc., to create a consonant relationship between the two elements. When one of the dissonant elements is a behaviour, the person can alter or eliminate the behaviour.

However, this method of dissonance reduction frequently presents difficulties for individuals, as it is frequently difficult to alter ingrained behavioural responses. Changing the conflicting cognition is one of the most effective strategies for resolving cognitive dissonance, but it is also one of the most challenging, especially in the case of profoundly held values and beliefs, such as religious or political learnings.

People reduce cognitive dissonance discomfort by pursuing information that aligns with and supports their current beliefs, by diminishing the significance of the conflicting belief, and by changing their beliefs to reduce the feelings of conflict.

Cognitive dissonance, media and information disorder

The media plays a significant role in shaping people's beliefs and attitudes. It has the power to influence public opinion, promote certain narratives, and shape our understanding of the world. In recent years, the rise of social media and the abundance of online news sources have amplified the impact of the media on individuals.

As said previously, mis- and disinformation encompasses false or misleading information presented as factual, often taking the form of fabricated stories, manipulated media, or biased reporting. In the digital age, its proliferation raises concerns as it can manipulate public opinion, sow confusion, and erode trust in media. The internet's dominance as a source of information, especially via social media, poses challenges for verification and quality control, necessitating efforts to prompt critical evaluation of news content.

There is an ongoing discussion regarding the necessity of regulating the content of news to prevent information disorder on social media. It is essential to develop robust mechanisms to ensure effective communication and a contributing atmosphere for constructive debate. Recent research attempts to adopt a critical posture towards existing information disorder flags (misinformation, disinformation) and their potential impact on the credibility of social media posts. False news indicators should encourage users to evaluate the information they receive and share on social networks with greater scrutiny. Cognitive dissonance in the detection of information disorder is a central mechanism underlying the flagging of false news.

Cognitive dissonance and information disorder can be closely intertwined. When individuals encounter information that contradicts their existing beliefs or values, cognitive dissonance can arise. People may experience discomfort when faced with conflicting information, especially if it challenges deeply held beliefs or aligns with their preconceived notions. In response, individuals may engage in strategies to reduce cognitive dissonance, such as dismissing or ignoring the contradictory information, seeking out confirmation bias by selectively consuming news that aligns with their existing beliefs, or rationalising the inconsistency.

Information disorder can exploit cognitive dissonance by presenting information that confirms individuals' existing beliefs, even if it is untrue or misleading. People are more likely to

accept and share information that aligns with their preconceived notions, as it helps reduce cognitive dissonance and reinforces their beliefs. This phenomenon can contribute to the spread of misinformation and make it challenging to address false narratives.

1.9 Examples of information disorder

Wildfires in the Amazon rainforest (August 2019)

In August of 2019, large wildfires were occurring in the Amazon rainforest. Many celebrities and people with large followings on social media (such as Logan Paul, Emmanuel Macron, Justin Trudeau, and Leonardo DiCaprio) are sharing pictures of these wildfires on social media to express their concern and to spark the discussion about climate change and deforestation in the Amazon rainforest.



Emmanuel Macron @EmmanuelMacron

Our house is burning. Literally. The Amazon rain forest - the lungs which produces 20% of our planet's oxygen - is on fire. It is an international crisis. Members of the G7 Summit, let's discuss this emergency first order in two days! #ActForTheAmazon

[Tweet vertalen](#)



9:15 p.m. · 22 aug. 2019 · Twitter for iPhone



Logan Paul @LoganPaul

amazon rainforest: how can i help? need advice on how i can actually make a change here; these pictures are breaking my heart... this is one of the most important ecosystems on earth. is there a fundraiser, a call to action, anything i can leverage my audience for on this?

[Tweet vertalen](#)



8:38 a.m. · 21 aug. 2019 · Twitter for iPhone



Justin Trudeau @JustinTrudeau

I couldn't agree more, @EmmanuelMacron. We did lots of work to protect the environment at the #G7 last year in Charlevoix, & we need to continue this weekend. We need to #ActForTheAmazon & act for our planet — our kids & grandkids are counting on us.

[Tweet vertalen](#)



leonardodicaprio 35.8m followers

[View Profile](#)



[View More on Instagram](#)

3,828,701 likes

leonardodicaprio

#Regram #RIG @iamNickRose: Terrifying to think that the Amazon is the largest rain forest on the planet, creating 20% of the earth's oxygen, basically the lungs of the world, has been on fire and burning for the last 16 days running, with literally NO media coverage whatsoever! Why?

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However, while it was a fact that certain parts of the Amazon rainforest were on fire, the pictures that are shared on Twitter and Instagram by the people above are not from these specific wildfires, but from ones having taken place at an earlier time. Hence, the pictures that were being widely shared on social media were used outside of their original context. Using such shocking, powerful pictures can add more power to the story and their side in the discussion on climate change and protecting the environment. Additionally, such pictures increase the interaction with the social media posts through likes, comments, and shares.

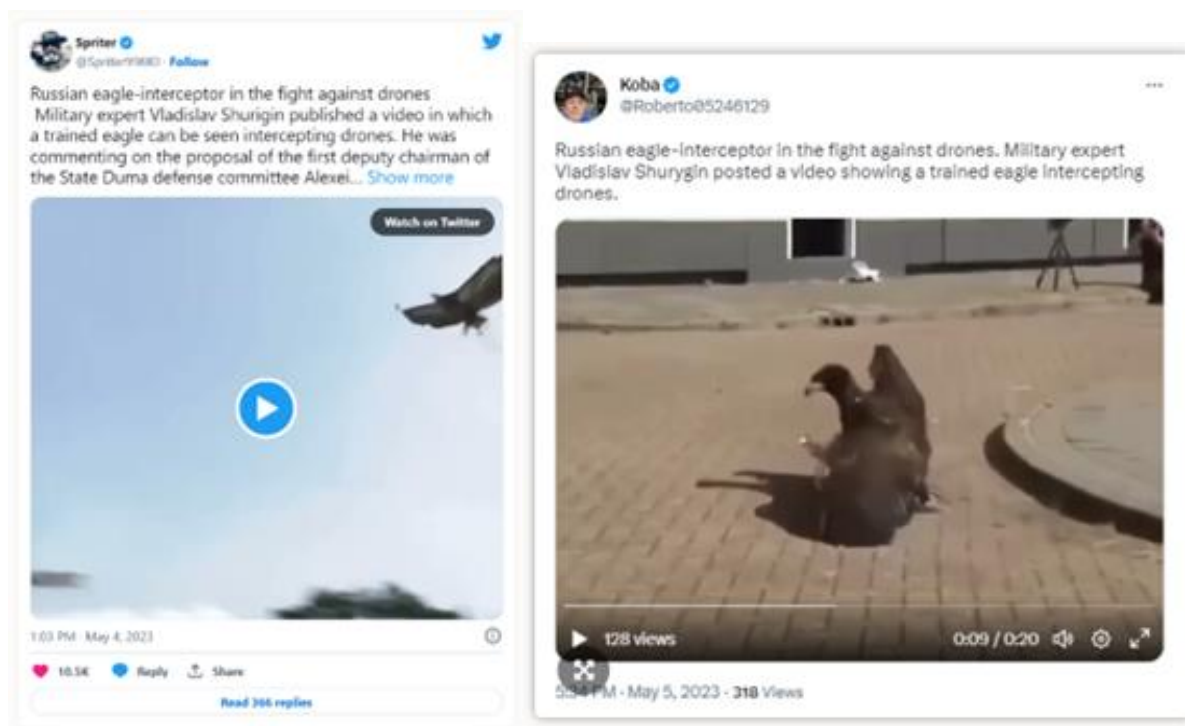
Wildfires in the Amazon rainforest are not new. Due to deforestation by burning parts of the forest to develop the soil for farming purposes, wildfires have already occurred multiple times. However, because of the large attention for this specific case on social media, people make it seem like this is the first time such a large wildfire has occurred.

However, although incorrect pictures are shared about this news story, this seems to be a case of misinformation, where the people posting the wrong pictures do not have the intention to mislead people. Instead, they have the goal of trying to put pressure on politicians to do something about deforestation in the Amazon rainforest. It appears as if no intention to harm anyone was present, and the wrong pictures were used by accident.

Russia is training eagles to intercept drones (May 2023)

This example is based on a [fact-check](#) by VRT NWS (the Flemish public broadcaster).

After two drones had hit the Kremlin at the beginning of May, messages on social media began circulating that Russia is training eagles to intercept drones that are attacking Russia. More specifically, voices on social media were saying that formations of these eagles would be used to protect Moscow during the celebration of Victory Day on May 9th. Many of these social media posts are accompanied by videos of an eagle intercepting a white drone, which has been viewed more than a million times. It was said that a military specialist was the first to release the video.



Various news outlets had picked up the stories that originated on social media about these eagles and reported on them (for example the Flemish popular newspaper [Het Laatste Nieuws](#) and the Dutch public broadcaster [NOS](#)).

Various factchecks show that different countries have indeed been experimenting with training eagles to intercept drones in the past. However, as these projects did not provide the desired outcomes, these training initiatives were stopped. The video that is circulating on social media is not recent and instead comes from a Dutch police training project with eagles in 2016. This video was uploaded on YouTube by the BBC in September of 2016, who were reporting on this training project by the Dutch police.

The World Economic Forum wants to ration water (April 2023)

This example is based on a [fact-check](#) by Knack, a Flemish news magazine.

A screenshot of a news article is going viral on social media in April 2023. The title of this article reads: "Water is not a human right. WEF orders govt's to begin rationing water into homes". This screenshot comes from an American website "The People's Voice", which is a website that has already previously been known to share false information. The article claims that the World Economic Forum is stating that water is not a basic human right and that governments should ration their water supply.



The article on “The People’s Voice” mentions a report about the UN Water Conference that was organised in March as the source of this information on the proposed water rations. The report about this conference summarises the discussions at the conference and writes about the Sustainable Development Goals (SDGs) of the UN but does not talk about specific water policies.

Quickly, various fact checking initiatives researched the claims made in the article. They concluded that the claims were false: The report about the water conference does not mention anything about rationing of water.

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