

(Mis)leading During a Crisis: Social Media and the Weaponisation of Dis-Information

November 13, 2020 | Article No. 28

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“A lie will gallop halfway round the world before the truth has time to pull its breeches on.”

— Cordell Hull —

US Secretary of State, 1948

The mobilisation and manipulation of information is unfortunately nothing new. An early account from Ancient Rome suggests that when Antony met Cleopatra, his political enemy Octavian created a smear campaign consisting of short, sharp slogans on the backs of coins (1). Octavian successfully used this early form of 'fake news' to become the first Roman Emperor (1). Fast forward to the 21st century and we can see that much (and also very little) has changed. New technologies, with the capacity to engineer and distribute information rapidly and on a mass scale, have become increasingly dangerous, especially when polarisation exists (1). The fight against mis-, dis- and mal-information has quickly become one of the most important fights of our time.

“The 21st century has seen the weaponisation of information on an unprecedented scale. Powerful new technology makes the manipulation and fabrication of content simple, and social networks dramatically amplify falsehoods peddled by States, populist politicians, and dishonest corporate entities, as they are shared by uncritical publics.” (1)

— UNESCO, 2020 —

- During this pandemic, global internet traffic has boomed and video, social networking and gaming applications have experienced tremendous growth.
- This boom has created an even bigger opportunity for both factual and false information to disseminate quickly and on a larger scale through social networks.
- In the context of COVID-19, the spread of mis- and dis-information puts social distancing and other preventative measures used to control the spread of the virus at risk.
- There are several risk factors and psychological mechanisms that make people vulnerable to mis-information and resistant to corrections.
- Although fact-checking and debunking solutions have been evolving rapidly, it is challenging to control the amount of misinformation that is being spread.
- The repercussions of mis-, dis- and mal- information left unchecked has meant that this has become one of the most important fights of our time.
- We need to help spread correct information, make fact-checking routine and focus on developing and implementing our critical thinking skills.



Fake News and the Rhetoric of 2020

Conversations about the spread of false information can get tricky, especially when everyone is using different terms or using terms incorrectly. So, it is important to first understand the meaning of the most common terminology and how recent rhetoric has influenced it.

Fake News

In the context of our most recent pandemic and political climate, we have seen the term **fake news** thrown around a lot – and the phrase in itself is quite powerful. The meaning of the term seems to have changed over time due to its frequent use in a very political context, making it harder to define. The word 'news' has always been used to suggest that the information being reported is verifiable. However, the phrase 'fake news' has largely been used to suggest that specific information is not deserving to be labelled as news, despite insufficient claims it is actually false (1). This oxymoron, which “lends itself to undermining the credibility of information which does indeed meet the threshold of verifiability and public interest” (1), has now made distinguishing between factual and truthful information all the more difficult (2). For example, a Google search for 'coronavirus facts' will lead you to official data and statistics, while searching for 'coronavirus truth' will lead to information on conspiracy theories and reports of cover-ups (2). For these reasons, the term 'fake news' is often avoided and will not be used in the remainder of this article.

“Contrary to claims that we live in a post-truth era, research suggests that people engaging with disinformation care deeply about the truth.

William Dance, a disinformation researcher who specializes in linguistics, has found that people engaging with disinformation are more likely to use words related to the truth, such as disingenuous; nonsense; false; charade; deception; concealed, disguised, hiding, show; find; reveals; exposes; uncovers. People engaging with false news stories are not disinterested in truth, but are hyper-concerned with it — especially the idea that it's being hidden.” (2)

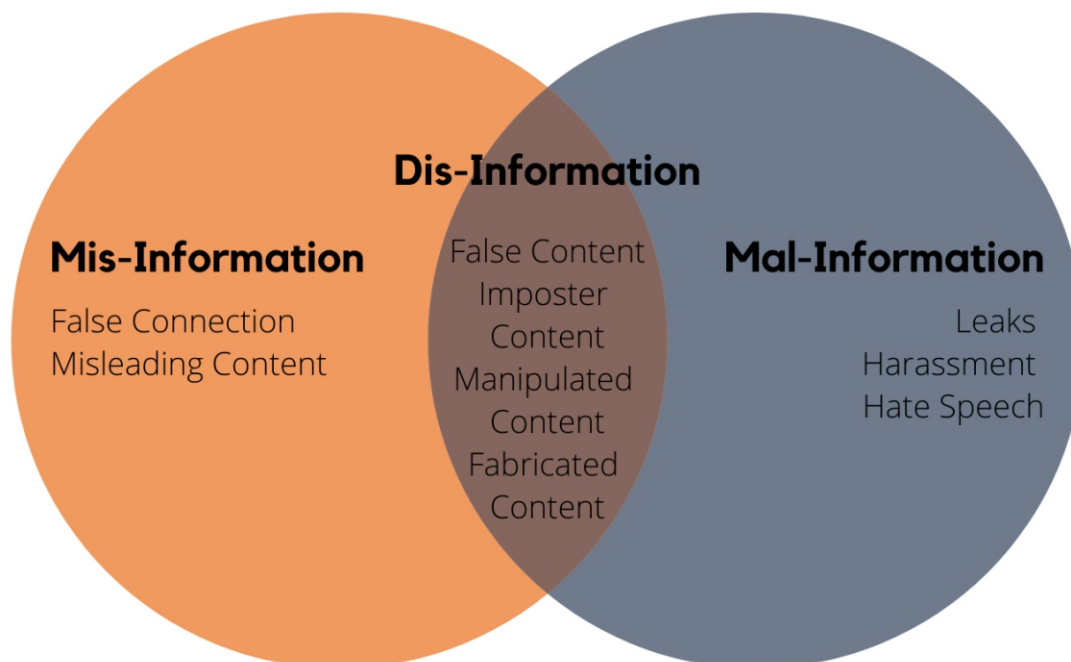
————— First Draft —————

August 3rd, 2020

Mis-, Dis- and Mal-Information

These three terms sound very similar and are often used interchangeably. However, they do have very different meanings. Mis-information and dis-information both indicate a situation where false information is shared and both have been used recently to describe information that has been circulating in various social networks. **Mis-information** is when this false information is shared but there is no intent to harm (3). **Dis-information** is when false information is shared but with the intent of causing harm (3). **Mal-information** on the other hand, is when genuine information is shared to cause harm (3). This can happen when private and often damaging information is purposefully leaked. Exhibit 1 outlines the types of mis-information, dis-information and mal-information that make up what has been referred to as Information Disorder (3).

Information Disorder



Types of Mis-Information and Dis-Information



False Connection

When headlines, visuals or captions don't support the content.



False Content

When genuine content is shared with false contextual information.



Manipulated Content

When genuine information or imagery is manipulated to deceive.



Misleading Content

Misleading use of information to frame an issue or individual.



Imposter Content

When genuine sources are impersonated.



Fabricated Content

New content is 100% false, designed to deceive and do harm.

Exhibit 1: Types of information disorder, mis-information and dis-information. Adapted from First Draft (3).

“During times like these, broadband networks are a consumer's information lifeline. They use it to keep up-to-date on the news – locally, nationally, and internationally. They use it now to stay in touch with their family and friends through social networks and messaging applications. They use it for online gaming and video streaming to keep themselves entertained when they are bored and cannot go to the places that they usually do. And most importantly, for many consumers, they are now using it to work and learn as a replacement for office and school activities – so it is a critical part of their daily lives beyond having fun and being social.” (4)

— Lyn Cantor, CEO —
Sandvine, May 2020

The effects of this COVID-19 information and technology boom can be seen in internet traffic patterns that have appeared since the beginning of the pandemic (Exhibit 2). For example, G7 countries have seen a 60% increase in traffic at Internet Exchange Points (IXPs), points where internet networks connect to exchange traffic (5), and overall global traffic shares from video streaming, gaming and social networking have gone up by roughly 6% since 2019 (2.2%, 2.04%, and 1.78% respectively) (4). Apps like YouTube and Netflix now take up the top two positions for applications with the greatest total traffic share, accounting for 15.96% (+7.25% since 2019) and 11.42% (-1.45% since 2019) respectively (4). Due to this higher demand, many application providers, like Netflix and YouTube, have reduced video streaming quality during peak times in Europe and some have even shifted their video streaming quality permanently from high to standard globally (5).



Increase in Internet Exchange Point (IXP) traffic in G7 countries compared to before the COVID-19 outbreak.



Video streaming, gaming and social networking make up 80% of the global application total traffic share. Web, marketplace, messaging, file sharing, VPN, cloud, and audio make up the other 20%.

Exhibit 2: Increases in Internet Exchange Point (IXP) internet traffic in G7 countries (5) and main contributors to current global application traffic (4).

The Good

One of the biggest advantages of social media is its potential to rapidly disseminate educational information. In the case of COVID-19, people have been able to quickly access current protocols, lists of symptoms, preventative measures, and other scientific information presented by governments, public health agencies, researchers and health professionals (6). It has also provided individuals with the opportunity to connect with family, friends and colleagues, which helps to reduce the feeling of stress, anxiety, isolation and the overall psychological impact from social distancing measures (6). Social networking and video communication platforms have also provided a valuable opportunity to arrange collaborative efforts between teams of people, including the organization of research projects and multi-centred trials (6).

The Bad

Although this quick spread of information through social networking has the potential to be helpful, it is hard to ensure the quality of information being disseminated (6). The task of ensuring information is current, valid, correct or applicable is not easily done (6).

“These [powerful new technological tools], along with the character of social media and messaging platforms that have limited quality control standards for determining what constitutes news, make it easy to counterfeit and mimic legitimate news brands to make frauds look like the real thing. Increasingly, it is also possible to engineer audio and video in ways that go beyond legitimate news editing in order to make it appear that a particular individual said or did something in some place, and to pass this off as an authentic record.” (1)

UNESCO, 2020

Social networking platforms like Facebook, Google and Twitter have begun employing their own fact-checking strategies (7), but is it enough? Questions have been raised on whether fact-checking initialized by large social networking giants can be trusted. Some suggest that business will likely get in the way and lead to a selective fact-checking process that serves only the interest of large clients (7). As a result, many independent and collaborative solutions are evolving rapidly (1). One example is The Trust Project, whose trust rating systems are now present on hundreds of news sites and large social platforms such as Facebook and Google (8). Their mission is “to amplify journalism’s commitment to transparency, accuracy, inclusion and fairness so that the public can make informed news choices.” (8)

“Whatever changes platform companies make, and whatever innovations fact checkers and other journalists put in place, those who want to deceive will adapt to them. Misinformation is not like a plumbing problem you fix. It is a social condition, like crime, that you must constantly monitor and adjust to.” (9)

————— **Tom Rosenstiel** —————

Author, Director of the American Press Institute and
Senior Fellow at the Brookings Institution

“If there is a great amount of pressure from the industry to solve this problem (which there is), then methodologies will be developed and progress will be made ... In other words, if there's a will, there's a way.” (9)

————— **Adam Lella** —————

Senior Analyst, comScore Inc.

COVID-19 Mis-information and What Makes us Vulnerable to it

While the extent of global information 'pollution' relating to COVID-19 is difficult to quantify, its effects are worrying. Mis-information that remains unchecked for long enough can affect our individual response and commitment to the very prevention measures and expertise that will keep us safe. It is therefore very important to comprehend what false information has been circulating and what makes us most vulnerable to it. Alistair Reid from First Draft, a company whose goal is to “scale training and establish industry standards on social monitoring, verification, and responsible reporting on disinformation” (10) reminds readers that “misinformation has a habit of slipping through our defences, waving a fake ID at the bouncers which normally stand guard in our mind and then making itself at home to become our assumed truth” (11). Table 1 outlines just a few examples of mis-information in six different categories that have circulated during the pandemic (11).

Category	Mis-information Example
Where the new coronavirus came from	<p>In addition to other theories about where the coronavirus came from and why it was created, one of the most believed falsehoods stems from a video allegedly showing a Wuhan market selling a wide variety of animals.</p> <p>The video was actually showing a market in Indonesia from June 2019. Youtubers removed the first few seconds of the clip which revealed the true location. While there may be some small truths to this story, being that the Chinese government did in fact close a Wuhan market and ban the sale and consumption of wild animals due to early cases in connection to the market, there were also cases that appeared in people who had no link to the market at all. An accurate timeline and report of events may never be known.</p>
How the new coronavirus spreads	<p>A tweet about a study estimating how many people left Wuhan before the region was quarantined was released by the WorldPop project at the University of Southampton using an image showing global air traffic routes from 2011.</p> <p>The image was picked up by Australian and British television without verifying it. The WorldPop project later deleted their tweet.</p>
Symptoms of COVID-19	<p>A list of symptoms attributed to Taiwanese experts, Japanese doctors, UNICEF, the CDC, and Stanford Hospital Board went viral in early March. The classmate of the sender claimed to have an uncle with a master's degree who worked in Shenzhen, China. The list's central claim was that a runny nose and sputum were not symptoms of COVID-19.</p> <p>Doctors have confirmed that these are symptoms.</p>
Treatment of COVID-19	<p>In perhaps the most famous example, President Trump claimed that chloroquine or hydroxychloroquine had been approved by the Federal Drug Administration for the treatment of COVID-19. At this point, the FDA had not yet approved the drug for use. Days later, a couple was hospitalized after taking a formulation of chloroquine phosphate intended for use as an aquarium cleaner. The husband later died.</p> <p>The FDA has since approved some forms of chloroquine and hydroxychloroquine as an emergency, experimental treatment.</p>
Response to COVID-19	<p>There have been many attempts to incorrectly frame how authorities, public figures and people are responding to the pandemic. A video was circulated depicting panic buying in various cities in Spain, the United Kingdom and Belgium.</p> <p>The video was eventually checked and traced back to a supermarket sale from 2011.</p>

Table 1. Examples of coronavirus mis-information across six different categories (11).

The extent to which mis-information is believed, especially during this time of COVID-19, has been attributed to a few different factors such as the source of information, the number of sources the individuals looks to for information, how the information is presented (video, audio or text), and the individuals emotional state, age, income and work status (Exhibit 3). Research has shown that information from social media is much more misleading compared to information from other expert or traditional news sources (12) (13). Increased exposure to social media was also associated with increased misperceptions about COVID-19 whereas the inverse was true for increased exposure to traditional news (12).



Those who obtained information from **1 or 2 sources** had **decreased health perception** and a **decreased ability to identify misleading information** (12).

Information on **social media** is **most misleading** compared to expert suggestions and traditional media (12)(13). Increased social media exposure is **strongly associated with misperceptions about COVID-19** (13). These misperceptions are associated with **lower levels of risk perception and social distancing compliance** (13).



Angry individuals more **readily act on a given claim** compared to anxious individuals (14). Angry individuals are **less likely to search for information** and if they do, they are more in favour of information that bolsters their view and against information that undermines their view (14).

Information is perceived as **more persuasive in video** compared to audio and text (15). **Videos** on social media **increase the risk of rumour propagation**, especially amongst a more vulnerable population (12).



Individuals aged **60+**, **lower or middle income**, and those **not working or unable to work** are **most likely to be misled** by videos on social media (12).

Exhibit 3: Factors in the uptake of mis-information during COVID-19 (12) (13) (14) (15).

Many of these factors may increase the likelihood we accept misinformation as factual information, but the truth is, as humans, we are all susceptible to believing false information. After all, we tend to be wired in similar ways. Exhibit 4 outlines just a few of the mechanisms underlying the psychology behind what makes us vulnerable to believing misinformation (16).

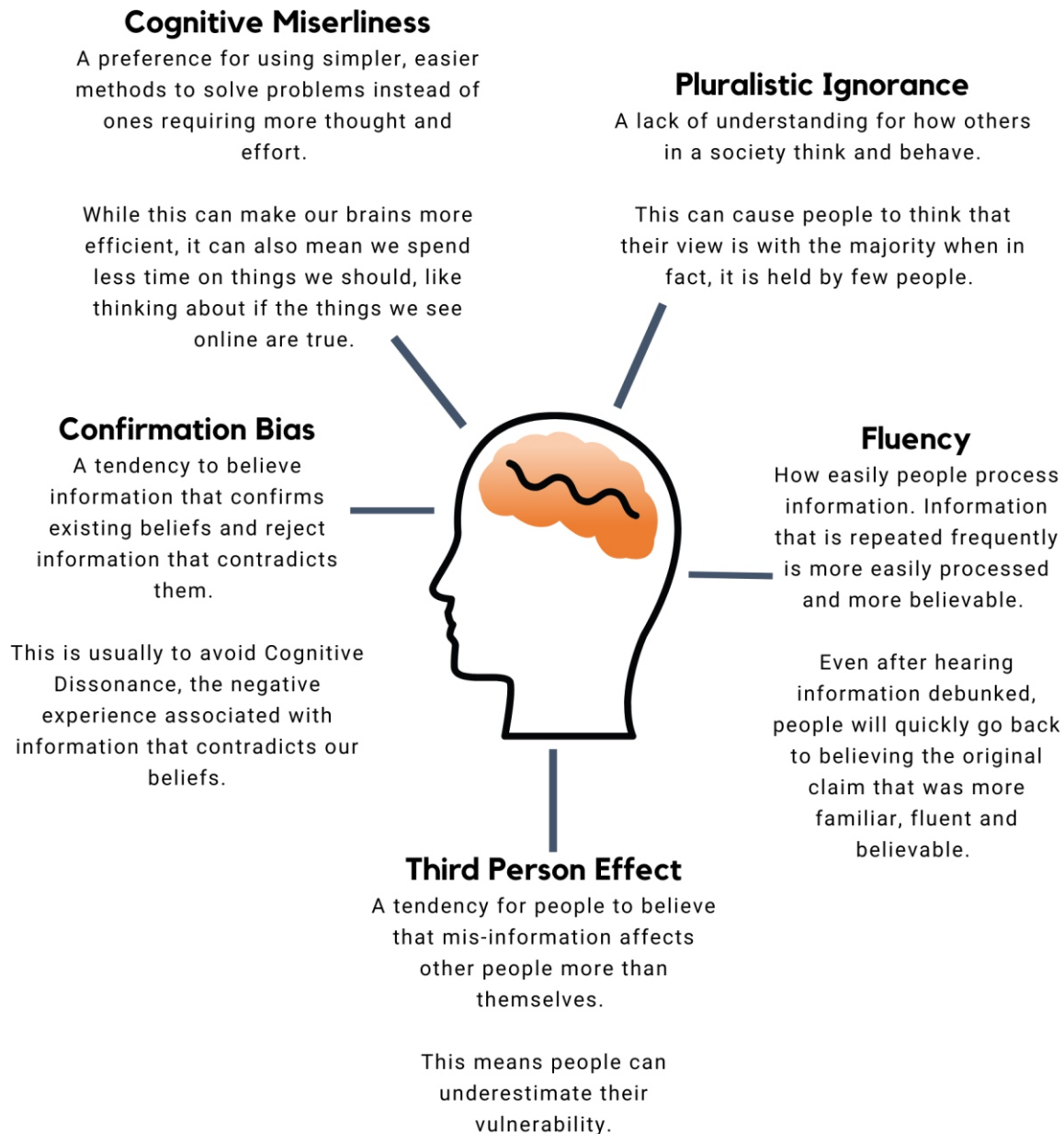


Exhibit 4: Psychology of what makes us vulnerable to mis-information (16).

One mechanism that is all too familiar is **Confirmation Bias**. In the context of accepting mis-information or dis-information as fact, what we already believe has a great influence on what new information we will take in (16). For some, this means getting the right information from the right sources early on can help us to counter the influx of other false information. However, if someone has already been frequently exposed to mis-information and has accepted it, it is more difficult to correct with debunking or fact checking (17). This continued influence of mis-information even after it has been corrected is known as the **continued influence effect** (17). The fact that mis-information is so hard to correct can mean that “when it comes to mis-information, prevention is preferable to cure” (17).

Another concept that explains why mis-information can be hard to correct is the **tainted truth effect**. In essence, this means that corrections can actually make people start to doubt other, true information and create a sense of distrust in everything they see online (17).

“The crisis we face about 'truth' and reliable facts is predicated less on the ability to get people to believe the wrong thing as it is on the ability to get people to doubt the right thing.” (9)

James Cascio

Distinguished Fellow, Institute for the Future

Fighting Mis- and Dis-information

A First Draft Council of Europe report calls on technology companies, national governments, media organizations, educational ministries, funding bodies to help crack down on the spread of mis- and dis-information through the creation of fact-checking engines, demanding transparency from social networking platforms, supporting public service media outlets, creating strong ethical standards, educating on the threat of information disorder, and standardizing a news literacy curriculum (3). Just as there are countless ways different institutions can help in the fight against the spread of false information, there is much we as individuals can do. The following are just three of the many steps we can take.

1. Practice fact-checking. You can find a toolkit [here](#) (18). Fact checking includes (1):

- Identifying and crediting original sources
- Identifying and excluding fake accounts
- Confirming visual content
- Verifying the recording and upload time of content
- Geolocating photos and video

2. Develop and use critical thinking skills. Critical thinking skills include (1):

- Inquisitiveness about a wide range of issues
- Concern to become and remain well-informed
- Alertness to opportunities to use critical thinking
- Trust in the processes of reasoned inquiry
- Self-confidence in one's own abilities to reason
- Open-mindedness regarding divergent worldviews
- Flexibility in considering alternatives and opinions
- Understanding of the opinions of other people
- Fair-mindedness in appraising reasoning
- Recognising and honestly facing one's own biases, prejudices, stereotypes, or egocentric tendencies
- Prudence in suspending, making or altering judgments
- Willingness to reconsider and revise views where honest reflection suggests that change is warranted

3. Help spread correct information. The NIH has compiled a list of [pre-made](#) posts designed to provide correct information and encourage following social distancing and other preventative COVID-19 measures (19).



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References

1. United Nations Educational, Scientific and Cultural Organization (2018). Journalism, fake news and disinformation. Retrieved from: <https://unesdoc.unesco.org/ark:/48223/pf0000265552/PDF/265552eng.pdf.multi>
2. First Draft (2020, August 3). The difference between the facts and the truth. The Medium. Retrieved from: <https://medium.com/1st-draft/the-difference-between-the-facts-and-the-truth-59e23c6185d>
3. Wardle C & Derakhshan H (2018, August). Information disorder: toward and interdisciplinary framework for research and policy making. Council of Europe. Retrieved from: <https://rm.coe.int/information-disorder-report-version-august-2018/16808c9c77>
4. Sandvine (2020, May). The global internet phenomena report COVID-19 spotlight. Retrieved from: https://www.sandvine.com/hubfs/Sandvine_Redesign_2019/Downloads/2020/Phenomena/COVID%20Internet%20Phenomena%20Report%2020200507.pdf
5. Organisation for Economic Co-operation and Development (2020, May). Keeping the Internet up and running in times of crisis. Retrieved from: https://read.oecd-ilibrary.org/view/?ref=130_130768-5vgoglwswy&title=Keeping-the-Internet-up-and-running-in_times-of-crisis
6. González-Padilla DA, & Tortolero-Blanco L (2020). Social media influence in the COVID-19 Pandemic. International braz j urol [online]. 2020;46(1):120-124. <https://doi.org/10.1590/s1677-5538.1bju.2020.s121>
7. Chu H (2020, June 12). Automated fact-checking won't stop the social media infodemic. Mashable. Retrieved from: <https://mashable.com/article/automated-fact-checking-misinformation/>
8. The Trust Project. About us. Accessed November 5th, 2020. Retrieved from: <https://thetrustproject.org/>
9. Anderson J & Rainie L (2017, October 19). The future of truth and misinformation online. Pew Research Centre. Retrieved from: <https://www.pewresearch.org/internet/2017/10/19/the-future-of-truth-and-misinformation-online/>
10. First Draft News. About. Accessed on Nov 4th, 2020. Retrieved from: <https://firstdraftnews.org/about/>
11. Reid A (2020, March 27). The 6 types of coronavirus misinformation to watch out for. First Draft. Retrieved from: <https://firstdraftnews.org/latest/the-6-types-of-coronavirus-misinformation-to-watch-out-for/>
12. Zhou J, Ghose B, Wang R, Wu R, Li Z, Huang R, Feng D, Feng Z & Tang S. Health perceptions and misconceptions regarding COVID-19 in China: online survey study. J Med Internet Res. 2020;22(11):e21099. <https://doi.org/10.2196/21099>
13. Bridgman A, Merkley E, Loewen PJ, Owen T, Ruths D, Teichmann L & Zhili O (2020, June 18). The causes and consequences of COVID-19 misperceptions: understanding the role of news and social media. Harvard Kennedy School Misinformation Review. Retrieved from: <https://misinfoeview.hks.harvard.edu/article/the-causes-and-consequences-of-covid-19-misperceptions-understanding-the-role-of-news-and-social-media/>
14. Han J, Cha M & Lee W (2020, September 17). Anger contributes to the spread of COVID-19 misinformation. Harvard Kennedy School Misinformation Review. Retrieved from: <https://misinfoeview.hks.harvard.edu/article/anger-contributes-to-the-spread-of-covid-19-misinformation/>
15. Mohammadi G, Park S, Sagae K, Vinciarelli A & Morency LP. ICMI'13: Who is persuasive? The role of perceived personality and communication modality in social multimedia. ICMI '13: Proceedings of the 15th ACM on International conference on multimodal interaction. 2013:19-26. <https://doi.org/10.1145/2522848.2522857>
16. Shane, T (2020, June 30). The psychology of misinformation: why we're vulnerable. First Draft. Retrieved from: <https://firstdraftnews.org/latest/the-psychology-of-misinformation-why-were-vulnerable/>
17. Shane, T (2020, July 14). The psychology of misinformation: why it's so hard to correct. First Draft. Retrieved from: <https://firstdraftnews.org/latest/the-psychology-of-misinformation-why-its-so-hard-to-correct/>
18. First Draft. Advanced toolkit. Accessed November 6th, 2020. Retrieved from: <https://start.me/p/wMv5b7/first-draft-advanced-toolkit>
19. National Institute of Health. COVID-19 social media resources. Accessed November 6th, 2020. Retrieved from: <https://www.nih.gov/news-events/covid-19-social-media-resources>