CSU POLITICAL SCIENCE SENIOR CAPSTONE

A Citizen's Guide to Navigating Information Disorder

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Introduction

The following report represents a semester's work of POLS492-004, a senior capstone class at Colorado State University in the Fall of 2021 semester. Throughout the semester, 19 students have worked in teams to create different chapters and sections of what ultimately became "A Citizen's Guide to Navigating Information Disorder", a resource for the community addressing some issues pertaining to our changing news media landscape and misinformation that plagues it. Throughout the semester, students have identified the themes surrounding Information Disorder that they want to research, and then wrote and presented their findings to the class. The semester culminated in a public presentation of their findings and their work to the broader members of the Colorado State and Fort Collins communities.

As is always the case, it is impossible to address all, or even most of the concerns surrounding misinformation in a single report. This is a growing field of scientific inquiry that scholars dedicate their entire careers to. Furthermore, it is always difficult to produce a single, focused piece of work with many people contributing their writings, thoughts, and opinions. In this case, there were 19 co-authors on this project, which always presents its challenges. Yet, despite all of these obstacles, students produced a meaningful piece of work, trying to outline the issues surrounding Information Disorder, and, more importantly, identifying things that can be done to navigate it, and, ultimately, address it. I hope that you enjoy it.

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CHAPTER 1

What is Information Disorder?

Information Disorder is the development and distribution of false information with or without the intent to harm. The implications of Information Disorder affect us all, and it is vital that in the age of social media we know how to navigate the overwhelming amount of information that we are exposed to everyday, on- and off-line. The growth of social media, and the ability for anyone to post anything on many platforms, resulted in a proliferation of false information, making it more accessible to those looking for it than ever before. This, coupled with decades long trends in decline of trust in national, local, and social media-based news, has led many people to become concerned about the so-called “fake news” and the general quality of information that they’re exposed to (Gottfried and Liedke, 2021). In this chapter, we will be discussing the history and misconceptions of Information Disorder as well as defining the terminology that helps us discuss it. This will allow us to address how we understand and combat Information Disorder going forward in today’s media landscape.

Most Americans have heard the term fake news at least once since former President Donald Trump popularized it during the 2016 presidential elections. Google searches for “fake news” skyrocketed following his initial mention, as more and more Americans fell prey to the manipulation of what was once considered a synonym to Information Disorder (Google Trends, 2021). In the aftermath of President Trump’s victory in 2016, there were even claims that he owed his victory to fake news for undermining his political opposition’s credibility and for misleading voters with falsified

news articles, although empirical evidence for such claims is likely overstated (Allcott and Gentzkow, 2017).

Figure 1: Headline discussing misinformation's impact

This can be seen in headlines with narratives like that in Figure 1, which exemplified claims of the circumstances of his victory (Solon, 2016). Since its explosion of popularity in 2016, fake news as a concept has primarily lost its meaning, instead turning into a partisan insult of sorts, easily weaponized and with strong negative connotations. As a result, is not useful in the discussion of Information Disorder because it no longer accurately describes the issue. Instead, fake news has polarized American media and has assumed a role as a political weapon against opposition, primarily used by those who don't trust the traditional news media outlets.

As fake news has snowballed since 2016, Americans' understanding of this has become more polarized and confusing. When asked about fake news, Americans come up with very different definitions of the term, ultimately rendering the term unreliable for discussing Information Disorder (Tong et. al, 2020). The researchers who studied this phenomenon noticed a significant portion of respondents who disregarded a genuine definition of fake news in favor of making politically-charged commentary about American media and politics. These partisan definitions discredit political opposition and news sources, displaying fake news's power as a political weapon.

The lack of comprehensive understanding of Information Disorder leaves Americans vulnerable to confusion and panic over the media. This can be seen when looking at the effects of fake news on news interaction. Fake news rendered many Americans confused as to the validity of the news they see and how to navigate false information. Knowing what information to trust in such a context can be difficult. At the end of 2016, for example, 64% of Americans had “a great deal of confusion” about basic facts in the news (Barthel et al., 2016). This confusion shows the importance of understanding Information Disorder and replacing mostly meaningless terms like fake news with more detailed and impartial terms. Misinformation, disinformation and malinformation are three facets of Information Disorder that can help navigate falsehoods in the media more effectively and provide citizens with more meaningful vocabulary to address the concerns about the information they encounter.

Misinformation, Disinformation, Malinformation

Misinformation is the first of the three facets of Information Disorder. Misinformation can be described as false information that is not created and shared with the intention of causing harm. Often, the person sharing does not realize that the information is false or misleading. Users of the internet are sometimes drawn to communities that are full of like-minded individuals that share a set of beliefs or interests (i.e., political party, religion, race, or ethnic group), which established a space that scholars call an echo chamber. When this happens, there is information that spreads which may reinforce their beliefs but may also contain misinformation that people ultimately believe.

Disinformation is the second of the three facets of Information Disorder.

Disinformation can be described as information that is intentionally false and is deliberately designed to cause harm to a person, social group, organization, or country. Making money, having foreign or domestic political influence, and general desire to create trouble (what some scholars call the “need for chaos”) are all malicious motivations for those who create disinformation. In many instances, those who share disinformation think they are helping a cause by sharing what they think is true information, but instead continue a cycle of sharing the same piece of information to other networks. Disinformation often turns into misinformation.

Figure 2: Image showing false statistics and perpetuating racist stereotypes

Consider the example above. The infographic marked Figure 2 was shared by former President Donald Trump on November 22nd, 2015, on his Twitter profile (Farley, 2015). Each highlighted number represents a piece of disinformation that was shared through a single image. Number one portrays a racist narrative of black men in our country that is used to provoke fear in the reader. Number two gives an incorrect statistic that also doesn't use the smaller population of black Americans. Instead, all black

people are generalized in this infographic which is misleading. The infographic states that “1% of blacks [are] killed by police” when in fact, black Americans are 2.5% more likely to be shot and killed by the police than white Americans (FBI, 2015). Number three shows incorrect statistics in which the 16% and the 81% need to be switched. According to FBI statistics from 2015, 81% of whites were killed by whites and 16% of whites were killed by blacks (FBI, 2015). Lastly, number four incorrectly states that there is a Crime Statistic Bureau when in fact, there is no such thing. There are other alternatives to finding crime-related statistics, but the Crime Statistic Bureau is not one. These incorrect pieces of information were used to mislead the audience by utilizing disinformation. This constitutes disinformation because the infographic was intentionally made with false information to persuade the audience towards a specific political conclusion.

Figure 3: Example of how headlines can lead the narrative

Malinformation is the last of the three facets of Information Disorder.

Malinformation is truthful information that is shared with the intent to cause harm to a country, organization, or person (Wardle, 2019). Often, this is private information that is

released to the public to be used against an entity such as a politician, a political party, a social group, or even a country. An example of malinformation was when emails from the Democratic National Committee and the Hillary Clinton campaign were hacked into and leaked by Russian agents to damage reputations during the 2016 presidential campaign (Wardle, 2019). This is a prime example of malinformation because the emails were private information that was obtained by Russian agents and released without permission of the Democratic National Committee and the Hillary Clinton campaign. Although the initial action of accessing private emails is malinformation, the motivations and reasoning behind the release are also a prime example of agenda setting. Next, we will discuss what agenda setting is and how it relates to Information Disorder.

Figure 4: Explains each facet of Information Disorder.

Agenda setting is another important term to define when discussing Information Disorder. It refers to the idea that the media can decide what topics are important

enough to make the news; they decide what people are going to be talking about. The media may be unsuccessful in convincing people what to think about a particular subject, but they are traditionally highly successful in telling people what subjects and topics to think about. To make this concept slightly clearer, the word agenda should be defined first. An agenda is, “a rank-ordered set of issues perceived to be most important at a given point in time.” Agenda setting is, essentially, how that rank is ordered, and what causes said issues to receive a perception of importance. Perceived issue salience becomes especially important when it comes to agenda setting. Unfortunately, this does not always mean that the issues that will impact individual’s lives directly are always at the top of their priority list. Frequently, the media choose to focus their attention on issues that they believe to be successful in garnering the attention of their audience.

History of Misinformation

Although Information Disorder, and particularly related terms such as fake news, have come into the public consciousness in the aftermath of the 2016 election, nothing about it is particularly new. Collectively malinformation, misinformation, and disinformation have been observable for all human history.

Instances of misinformation are prevalent throughout history. This is evident by the resulting coverage and perceived response to the War of the Worlds broadcast by the Columbia Broadcasting System (CBS) in 1938. The War of the Worlds was a broadcast radio drama adaptation of H. G. Wells’s science fiction novel of the same title. Shortly after the broadcast had aired several fake news bulletins, indicating widespread hysteria across the nation over the threat of a Martian invasion (a subject of The War of

the Worlds broadcast). Although there were documented instances of hysteria, the “supposed panic was so tiny as to be practically immeasurable on the night of the broadcast” (Pooley, 2013). News coverage of the event and information regarding public response to the broadcast, however, did not reflect that, instead amplifying a mostly false narrative, as a result of newspapers receiving inaccurate information from PBS and NPR broadcasts (Pooley, 2013). The news sources of the time framed these events in a manner suggesting public hysteria was widespread when it was not.

Framing shapes how information is viewed and perceived by the world (Stecula, 2021). When a journalist writes a story, it is up to them to decipher how to frame the piece, meaning they can highlight aspects of the story. Frames often differ depending on chosen perspectives and values, and this process can manipulate how people form their own opinion on issues (Chong, 2007). In the case of the War of the Worlds Broadcast, the information was framed around hysteria and panic, and persuaded people to believe the broadcast’s perception of the event rather than the truth.

Framing is an unavoidable aspect of communication and journalism. Journalists frequently have to make choices about which aspects of the story to highlight, and in what ways. These choices then have consequences in terms of how the audiences react to that information. One type of framing is equivalency framing which refers to when there are two different ways, the same information is presented (Stecula 2021).

Figure 5: Examples of different framing of the same event

In Figure 3, Fox and CNN both wrote about the same event, yet framed it in different ways, which lead the audiences to draw different conclusions about what transpired. Two other common types of framing are episodic, which is when an issue is about a particular instance, versus thematic framing, which is when an issue is considered more broadly in a larger context. Take the headlines about Black Lives Matter in Figure 4, for example. The headline on the left is an example of episodic framing because it refers to a singular and personal event that is related to the BLM movement. The headline on the right however is an example of thematic framing, as it is commenting on the BLM movement in the context of civil rights in the U.S.

Figure 6: Left shows episodic framing, right shows thematic

As mentioned above, disinformation is one of the three primary facets of Information Disorder and refers to information that is false and intends to mislead the consumer. It is worth remembering that the primary source of disinformation is often political groups or other societal actors motivated by political goals. The Nazi regime provides a great case study of the utilization of disinformation to further political interest and expand political power (US Holocaust Museum, 2020). A key aspect of the Nazi's widespread weaponization of disinformation was the fact that the party had absolute control of the media within the region, meaning that the people of Germany were only reading/seeing what the Nazi's wanted (US Holocaust Museum, 2020). This practice is referred to as gatekeeping, which is a term that must be further defined before one can fully understand how the Nazis were able to spread disinformation so effectively.

Gatekeeping refers to someone with authority deciphering what information and stories are to be shared. Similar to the Nazis only allowing for Germans to hear about events and issues that supported their regime, journalists today utilize gatekeeping as well to control what becomes news and what slides by without public awareness (Pingree 2013). Gatekeeping is the process that information goes through before it becomes news as it passes through multiple gates, otherwise known as journalists, editors, and publishers, and is transformed in the process before being published (Shoemaker, 2009). While gatekeeping was utilized by the Nazis to hinder information from civilians, gatekeeping now is most often done by professional journalists and trained editors, rather than leaders or political parties.

Figure 7: An example of Nazi Propaganda

The Nazis primary reason for spreading disinformation was to discriminate against the Jews and to indoctrinate the German population in the Nazi ideology (US Holocaust Museum 2020). The thought was that if the core principles of Nazism were all that was being consumed via the media, then the population would fall in line with those guiding principles/practices. A defining characteristic of Nazi disinformation was that it was heavily nationalist in nature and tended to denounce other countries and ethnicities to make the Nazi party seem above all others (US Holocaust Museum 2020). Figure 5 is a great example of the Nazi's advertising the "superiority" of the Aryan race over their Jewish counter parts. Throughout this period the Nazis used antisemitism to dehumanize the Jewish people and create a caricature to stand next to their infallible depiction of the Aryan race (US Holocaust Museum 2020). Images like these were common and were not exclusively found in print media (US Holocaust Museum 2020). Nazis utilized radio, newspapers, and even films to spread their ideology and disinformation that painted the party in a more palatable way. Most people today know these forms of disinformation by the more common identifier, propaganda. Propaganda was a perhaps the most utilized form of disinformation by the Nazi party (US Holocaust Museum 2020). Propaganda can be defined as "information, particularly of a biased or misleading nature, used to promote or publicize a particular political cause or point of view."

Misinformation, malinformation and disinformation have been present throughout human history. While the new forms of media have changed the way these phenomena are consumed it is important to understand that they have always been present and the historical examples given above are key to developing a plan to combat Information Disorder today.

Today's Infodemic

There are many types of false and purposefully persuasive, leading information that make up the entirety of what we call Information Disorder. The more commonly discussed types, such as disinformation and misinformation, have been defined above. However, there are others that must be understood as well if one is to have a full grasp of the problems with our informational ecosystem. One term that serves as a sort of culmination of all the others is “infodemic.” This is a newer, colloquial term that combines the words “information” and “epidemic.” This term originated in the early 2000's, during the SARS breakout, but it has since gained increased popularity during the COVID-19 pandemic. As the name suggests, it reflects an epidemic of information. It's a flooding of all types of information, true and otherwise, that makes it exceedingly difficult to tell the difference between fact, rumor, and intentionally false data. The potential for an infodemic to occur is higher now than it has ever been due to both the speed at which modern information travels and the volume of information that is consumed by the average person.

CHAPTER 2

Why should we care about Information Disorder?

Now that Information Disorder and its components have been defined, it is crucial to understand why Information Disorder matters and why individuals should care. The implications of Information Disorder can be categorized into two categories – societal and personal implications. This chapter will explore how misinformation has played a role in the 2016 election, the COVID-19 pandemic, and acts of violence in the form of recent hate crimes and riots in the United States. These events have all shown the real effects of misinformation on how society functions. Secondly, this chapter will evaluate how Information Disorder has impacted mental health and health decisions on a personal level. For anyone who cares about the future health of our society or the wellbeing of anyone who consumes media, the reality of Information Disorder must be confronted.

Societal Consequences

2016 Election

The 2016 Election was a monumental landmark for emphasizing the importance of misinformation in today's society due to the controversy brought about from the information being consumed during this time. Many claims were made during the 2016 election regarding misinformation and the impact that was having on the candidates and the election outcome, specifically towards the Electoral College. An obsession around “fake news” was highlighted during the 2016 election that challenged the legitimacy of our voting system and the winning candidate, Donald Trump. Consequences that arose during and after this election include the increased level of distrust in government, the

amount of misinformation from foreign sources causing a national security issue, and the voter reliance on misinformation. This section of the chapter will examine several of the media reports that speculated “fake news” won Trump the election, consequences that arose from this election, and the lasting impact misinformation had on society after the 2016 election.

Figure 8: Decreasing trust in government over time

To begin, the 2016 election highlighted the extreme level of distrust that citizens have towards the government. The graph above represents a study done by Pew Research Center, which found that only 19% of people felt that they could always or most of the time trust the government, these were the lowest numbers in the past half-century (Peer Research Center, 2020). The impact of this distrust can be seen specifically when people in society and media began to speculate that the reason Trump won the election was because of Fake news. One example of this speculation emerging can be seen from *The Washington Post* report “A New Study Suggests Fake News Might Have Won Donald Trump the 2016 Election” (Blake, 2018). This report includes speculation on the

impact of Russian interference and misinformation's impact on the lack of support for Hillary Clinton. To further examine the impact misinformation had on the election, a BuzzFeed analysis examined the total engagement of real news and fake news on Facebook. This analysis found that in 2016 the top 20 fake news stories received more engagement than the top 20 factual news stories, which can be seen in the graph below (Silverman, 2016).

Figure 9: Buzzfeed analysis of Facebook engagement during the 2016 election

Though the amount of misinformation circulating on social media has certainly been troubling, claims of misinformation swaying election results might be overstated (Allcott & Gentzkow 2017).

COVID-19

Another situation that shows the impact of misinformation is the COVID-19 pandemic. The misinformation in this situation matters because it can impact the overall safety and health of society. One of the situations that misinformation fed was the idea that the COVID-19 virus was being spread through 5G cell phone technology. While

proven false, this storyline gained momentum around the world. Because people in many countries believed this false information, it presented a large public safety concern and opened the doors to a starting lack of trust for experts. According to Agley and Xiao (2021) there were several protests in Australia and the United Kingdom. In the United Kingdom, there were people that were setting 5G wireless towers on fire (Meese et al., 2020). Even in Canada, the idea that 5G cell service could be linked to the spreading virus is believed by 4% of the population (Stecula, Pickup, & van der Linden 2020). Because of beliefs such as the one above, this had societal implications regarding safety and national security, even though the reasoning behind the protests was not justified.

There are also societal consequences surrounding misinformation that has been spread about the effectiveness and necessity of wearing a mask. According to the Centers for Disease Control and Prevention (2021), in 2020, there were two studies done that inaccurately stated that fabric masks did not help with stopping the spread of COVID-19. However, this has since been proven false. Despite being proven false, people used this story line to justify not wearing a mask. The CDC elaborates that the studies that stated fabric masks were not effective lacked a control group that was not wearing masks. When people wear masks, it has been found that there has been a lower number of hospitalizations and a slower rate of community transmission (Centers for Disease Control and Prevention, 2021). However, despite what experts have said, people still choose not to wear masks, which impacts society's health. If the virus continues to spread at a higher rate because of misinformation surrounding masks, more people will get sick.

Another example of misinformation that was spread during the pandemic was the origin of the virus. For some time at the beginning of the pandemic, there was misinformation surrounding where the virus came from. According to Agley and Xiao (2021), it was found that COVID-19 is a zoonotic virus. This means that the virus began in animals and later made the transition to begin impacting humans (World Health Organization, 2020). However, countries continued to point blame at each other because of the misinformation that was spreading. This led to racial disparities that impacted some people's opinions and perceptions of others. According to Ruiz et al. (2020) at Pew Research Center, Black and Asian Americans have experienced more discrimination since the pandemic began. This misinformation not only impacted people's opinions, but also could have impacted some people's safety. People should care about the misinformation surrounding the pandemic because it impacts the safety and health of society, as seen through the examples during the COVID-19 pandemic that are discussed above.

Current Implications

In recent years, misinformation has been linked to various crimes, acts of violence and racism. As previously mentioned, the era of COVID-19 has specifically been a source of hate directed toward Jewish, Black, and Asian Americans (Greenblatt, 2020). Rogue posts on forums such as Telegram, 4chan, and Gab have continued to link COVID-19 through racist messaging (Walther, 2021). The consequences of this rhetoric have produced violence. In 2020, an Asian man was "kicked in the back and told to go back to his country" (Greenblatt, 2020). In another horrifying instance, "a perpetrator attacked a

family from Myanmar, stabbing three victims including a 2-year-old girl and a 6-year-old boy. The assailant told police he feared the victims were Chinese and infecting others with the coronavirus” (Gover, 2020). According to the *New York Times*, violence being preempted by misinformation is an emerging trend not just in the United States, but across the globe. In Sri Lanka, Facebook groups have been responsible for spreading rumors about Muslims and planning attacks — one even led to a man being burned to death (Taub and Fisher, 2018). Instances like this demonstrate the destructive ability of misinformation.

Another example of the real consequences of misinformation can be seen in the 2020 election. Misinformation about the legitimacy of President Joe Biden’s victory was distributed and shared on radical social networks like Telegram and mainstream sources such as Facebook alike. This created mass outrage that has manifested in a variety of ways. Misinformation motivated lawsuits in multiple states, audits, and most notably, the Capitol riots on January 6th, 2021. Many rioters confirmed their participation was motivated by the call to action in conspiracy-ridden channels. The misinformation of influence shared conspiracy theories on “how the breakup of American was going to happen...and directly predicted that the 2020 presidential election was going to increase violence, and potentially spiral into a civil conflict.” (Walther, 2021). All of this further cemented the reality that misinformation can have real and tangible consequences.

Personal Consequences

Depression and Mental Health

Coinciding with the rise of social media, there has been an increase in the number of individuals that are experiencing depression and mental health consequences due to their information diets. In this section, the relationship between possessing beliefs in misinformation and an adverse effect on mental health will be examined. The number of studies researching the adverse effects that misinformation has on mental health has increased exponentially since the onset of the COVID-19 pandemic. Researchers have taken a variety of approaches in their attempts to conclusively establish a causal relationship between misinformation and an increase in mental health issues such as anxiety and depression. While studies of the matter are still new, and more research needs to be done, the results already point to a strong conclusion: People who believe in misinformation are much more likely to experience mental health complications than those who do not.

A 2020 study published in *Frontiers in Psychology* studied the effects of misinformation in eight different countries and regions across the globe. 8,806 adults from Belgium, Canada, Hong Kong, New Zealand, the Philippines, Switzerland, and the United States completed surveys that asked them questions about how strongly they believed in various COVID-19 misinformation and conspiracies, what their primary source of information was for COVID-19 related information, how strongly they trusted COVID-19 information when it came from various sources (e.g. health agencies,

politicians, traditional news organizations), and participants self-reported how strongly they felt they experienced anxiety and depression (De Coninck et al., 2021).

The study concluded that there was a strong correlation between polarized political and media environments and an increase in belief in conspiratorial thought (De Coninck et al., 2021). Furthermore, depression was found to be clearly associated with misinformation and/or conspiratorial beliefs in all nations in which the survey was conducted (De Coninck et al., 2021). The study also concluded that “exposure to traditional media was strongly and negatively associated with both anxiety and depression, and that exposure to digital media and personal contacts was positively associated with anxiety and depression” (De Coninck et al., 2021).

Additionally, forensic psychiatrist Vasilis K. Pozios, an expert on the influence social media has on mental health, states that this negative influence is by design. In an interview with Psycom, an Internet website dedicated to discussing topics of mental health, Pozios stated:

“Since ‘fake news,’ or false or misleading news is intended to manipulate public opinion, it’s designed to provoke an emotional response from a reader/viewer, it’s often inflammatory in nature and can elicit feelings of anger, suspicion, anxiety, and even depression by distorting our thinking” (Margit Erdelyi, 2021).

Pozios also stated misinformation tends to cause the reader to experience feelings of “anger and frustration, especially if the reader/viewer feels powerless in the face of attempts to manipulate the public opinion by way of fake news” (Margit Erdelyi,

2021). Pozios pointed to a recent study conducted by the American Psychological Association (APA) that highlighted a significant increase in anxiety amongst all demographics to support his beliefs (Margit Erdelyi, 2021).

A different study conducted by Chen et al. also sought to conclusively establish a link between mental health and conspiratorial beliefs. The study surveyed 252 Ecuadorian health care workers early in the COVID-19 pandemic. The survey asked participants what they thought the source of the virus was, with participants able to choose answers including: natural origins, intentional lab creation, accidental lab creation, or unsure of the virus's origins (Chen et al., 2020). The study found that participants who chose that the virus was intentionally created in a lab, which represented the answer associated with conspiratorial beliefs, were significantly much more likely to be experiencing anxiety than participants that chose any other answer on the survey (Chen et al., 2020).

Presently, there are only a handful of studies on how misinformation negatively impacts mental health. But, with the amount our society has come to utilize social media and the Internet on the daily basis, this line of research will likely continue to be the focus of scholars around the world. Now that the COVID-19 pandemic has helped to bring awareness to this problem, and early studies have confirmed that there is in fact a causal relationship, future studies will be needed to examine the extent that mental health is being affected by misinformation, and the impact that that has on society. While many of the societal problems that the COVID-19 pandemic has exposed will dissipate as the pandemic wanes, the negative effects that misinformation has on mental health is surely an issue that we will need to grapple with for years to come.

Personal Health Choices

The COVID-19 pandemic has had both societal and personal implications, in terms of health choices. This paragraph will dive into how misinformation is linked to the personal health choices that were made during the pandemic. During the start of COVID-19, the CDC encouraged and, at different times, mandated that everyone wear a face mask to lessen the spread of the virus, and to help protect oneself and others from getting it. But not everyone had the same response to the orders being made by medical authorities because of the distrust that exists. To be more specific, there is a lot of distrust that exists between the Black community and medical authorities due to the “...centuries of abuse of Black Americans that began with the slave trade” (Conger, 2021). Since the mistreatment of Black Americans still exists within the medical system, Black people are more likely to have a negative evaluation of medical authorities. Thus, this community will not trust any medical mandates or recommendations, resulting in a lack of mask wearing or social distancing.

Another issue in the spread of misinformation during the COVID-19 Pandemic is that the lack of access to adequate healthcare has an additional impact on marginalized communities. If one does not have a regular physician, then they do not “...have a trusted source in the medical field to resort to” (Conger, 2021). This resulted in high COVID cases in African American neighborhoods during the start of the pandemic. Thus, when there is distrust towards the medical system and a lack of adequate health access, it leads people to resort to misinformation that is spread through outlets such as social media. When one spends any time on social media that contains misinformation, one is

likely to be influenced by it, affecting their behavior towards certain issues, such as COVID. It is important to note that “As cumulative exposure to misinformation increases, users are likely to experience a reinforcement effect whereby familiarity leads to stronger belief” (Dechêne et al., 2010). So, the more exposure one has to a media source, the more misinformation one is exposed to and is influenced by. It is imperative to understand the role of misinformation as it impacts people’s personal health choices because it is affecting the lives of others around us as we continue to live in a pandemic where the death toll keeps increasing.

Chapter 3

Media can be a force for good in society by presenting information to the masses, but at the same time these communications can be weaponized for harmful purposes. Disinformation has been a problem in various societies for millennia - even the ancient Greeks dealt with Macedonian spies spreading false information about King Phillip's plans to attack Athens. In recent years, though, the problem seems worse than ever. Massive disinformation campaigns now seek to control public opinion and undermine democracy itself (Ferguson, 2020). That raises the question, how did disinformation get to be so bad in the present day?

The Media Landscape

In trying to understand present-day disinformation, the current media landscape – and how it evolved throughout history as technology changed – is a crucial element to consider. In the past, the media landscape was made up of traditional mediums such as television, print magazines, and newspapers. The media landscape has since transformed over the years to include talk shows and talk radio, cable news, the internet, and social media. Most people will notice the different changes in the actual physical medium like our transition from newspapers to the internet, but perhaps not the more subtle shifts in things such as content, who creates it, their intentions and how people consume that information. This has shaped the media landscape in a whole new way which has taken away some of the power from gatekeepers. Primarily because anyone can post content on the internet, sharing information has become quick and accessible for all. This leads to higher competition between creators to get information out, decreasing their attention

to quality reporting in the process. Furthermore, the new media landscape considerably affects individuals and the way they consume information. With such an over-saturation of information constantly being put out by creators, some individuals become unsure about the information they are consuming and not as trusting of the media anymore (Heinecke, 2019).

The Decline of Local Media

Local newspapers used to be a dependable source for valuable information, but these outlets may not survive much longer in the present media landscape. A clear threat to the current and future status of local newspaper ecosystems is the influence of large financial firms. These corporate entities look for local newspapers that are teetering on financial ruin, then swoop in and buy the company out. Motivated primarily by profit, these financial firms care very little about the quality of news produced and the influence that these local newspapers have had on their communities. Instead of viewing these entities as a valuable public service, they treat them as businesses that need to make a profit. These hedge funds have had such a nefarious ownership presence, that they are often referred to as “vulture funds”. According to a recent analysis carried out by *The Financial Times*, half of all U.S. daily newspapers are controlled by financial firms (Coppins et al., 2021).

One important financial firm is the Alden Global Capital firm. Alden Global Capital's impact is worth mentioning for a few reasons. For one, they own around 200 newspaper outlets, including Colorado's very own, *The Denver Post*. Alden Capital has developed a pattern with the newspapers they obtain. First, they gut the staff, then

proceed to sell off any real estate that the paper occupies and drive up subscription prices. These changes result in a considerable drop in the quality of the newspapers (Coppins et al., 2021). It does not stop there - the worse news product is just a byproduct of the limited staff and resources, but the all-too-common result is that the paper eventually folds, thus opening the door for a news desert. In *The Denver Post's* case, the threat of it completely folding is not imminent, but the best of Denver's print newspaper scene is feeling the effects of their vulture fund owners. It was reported by the *Denver Newspaper Guild* that since Alden took ownership of the *Post* in 2011, its staff has been cut down by about 70% (Aiello, 2018). Those who have historically been the gatekeepers and regulators of news media have had their roles changed and replaced. These old gatekeepers - reporters, producers, and editors - now face extinction. Local newspapers and sources are getting bought out by major media conglomerates, causing a decline in reliable local reporting while promoting a mass national narrative.

According to an ongoing study by Harvard University called The Future of Media Project, out of the 672 major daily newspapers in the United States, 382 of them are owned by media conglomerates such as Gannett Co., Inc., Alden Global Capital Venture Capital, and Chatham Asset Management (The Future of Media Project, 2021). With over half of all local news sources being owned by a small group of companies, it is understandable that this is of concern. The narratives told by the news sources can easily be changed and those communities that rely on local news can easily be manipulated en masse by these companies. Journalistic integrity, especially in local independent news sources, is incredibly important but they have been on a rapid decline.

While local independent news sources have been on the decline, social media platforms have been growing in popularity since the early 2000s. Social media websites such as Facebook, Twitter, and Reddit have been becoming the new newspaper for those trying to keep up with current events. According to a study done by Pew Research, around half of all Americans regularly get their news from social media websites (Walker & Matsa, 2021). The classic form of receiving news from the paper, radio, or even the television is quickly being replaced by the convenience of getting news directly to an entertaining app in the palm of one's hand. This rise in new ways to access news and media has been beneficial as the accessibility of these sources is much higher than something such as a newspaper. Unfortunately, easily accessible and often free digital media comes with its own unique issues. One of the largest issues is how these media companies and journalists make money off of their work. Instead of selling copies of their papers with some advertisements in them, most digital networks rely almost solely on advertisements.

One of the most pressing parts about the issue of advertising is that advertisements online are much less expensive per advertisement compared to those on print, television, or radio. "In the United States alone, from 2008 to 2017, newspapers lost more than \$20 billion in print advertising, close to half of total industry revenues, and cut newsroom employment by 45 percent." (Persily et al., 2020). This decline of employment led to the loss of over 30,000 professional journalists that was only slightly offset by digital news expanding their journalists from 7,000 to 13,000. (Persily et al., 2020). There has been a change of news media from focusing on telling the news in a

factual and digestible way to one that revolves around profit. Local independent media sources have been being bought out and replaced by national and digital forms of news media that can mass-produce stories that generate advertising revenue. The decline in journalists and independent news sources is something to be concerned about and to take note of when consuming any form of news.

News Deserts

Reliable local newspapers and local media outlets are disappearing, leaving an informational void in their place. These regions which no longer have any local news outlets have been dubbed the news deserts. According to a poll conducted by the Knight Foundation, 45% of Americans hold their local news organizations in high esteem, whereas only 31% trust national news organizations to the same degree (Sands, 2019). The problem is, local news organizations are a dying breed, and people are still looking for other resources to fill that void. Furthermore, while new technologies allow people to find new and more diverse sources of information, they also raise questions over who is producing information, is that information being checked for validity, and what are the motivations of the person creating and spreading that information. Hence, so-called “news deserts” open the door for misinformation.

One scholar at the fore of making sense of what happens to communities when pervasive news deserts arise is Penelope Muse Abernathy, who holds the Knight Chair position in journalism and digital media economics at the University of North Carolina at Chapel Hill. In her 2018 report, *The Expanding News Desert*, Muse Abernathy talks about how the erosion or complete erasure of local news has a larger impact on public

discourse than just the community who has experienced the news media loss. Muse Abernathy says that “our sense of community and our trust in democracy at all levels suffer when journalism is lost or diminished” (Abernathy, 2018). A painfully obvious example of the larger importance of local newspapers can be identified in the context of the COVID-19 pandemic: local newspapers are usually the first places that organizations like the CDC go to learn about regional conditions and outbreaks (Abernathy, 2018). Since this piece was produced by Abernathy, news deserts have only continued to multiply. To tie it back to the larger level of importance that local news serves, it is well known by now that we have been arduously enduring a pandemic that has spared no county across all the United States. Center for Disease Control officials have pointed out how trying to get a pulse on health crisis developments through social media is much less reliable than using local newspapers (Abernathy, 2018). This insinuates that had news deserts not been so pervasive in the United States, the CDC could possibly have had an easier time tracking and trying to limit the spread of COVID-19.

Another important function of Abernathy’s piece is her discussion about what players ascend when news deserts become a reality. Muse Abernathy identifies how this void left by dissipating local journalism is subsequently filled by the “digital entrepreneurs” (Abernathy, 2018). This has led to a change in gatekeeping, and with an abundance of outlets to create content paired with unscrupulous fact checking, anyone can be creators and curators of information in the internet space.

The Motivations of Disinformation Creators

Understanding why misinformation within the media landscape occurs as often as it does today requires focusing on what motivations are present within the media to create and disseminate misinformation. There is a certain appeal of the polarization that misinformation creates, which is often fueled by efforts to drive profit margins, gain the upper hand against competition, and support political objectives. These motivations lead media outlets to provide misinformation that meets the present demand of polarization and hyper-partisanship within society today. Through fulfilling this demand, media outlets have established a supply and demand relationship in which misinformation is used to their benefit and to the detriment of their viewers.

Pleasing viewers and consumers of a particular news media source has become a large motivator for the media. Dating back to the start of the 21st century, there has been a trend with news consumption where people seek out news sources that they know will tell them what they want to hear (Hsu, 2009). When those that consume a news outlet's content are satisfied with what is being reported on and how it is being reported, the ratings for that news outlet are bound to go up. Consequently, higher ratings mean higher earnings, thus providing a monetary incentive serving as motivation to further create and disseminate misinformation. Furthermore, the usage of social media platforms by these news outlets only provides additional avenues through which producing misinformation can be taken advantage of.

One of the most essential factors necessary to understand what motivates supplying misinformation within news media is the demand this supply is addressing. The demand is dictated by identity-based attributes of the audience of any given news

source and how these identity-based attributes make the audience especially susceptible to misinformation. These attributes include conscious and unconscious cognitive vulnerabilities such as the need to achieve emotional/ideological validation, emotional arousal triggers, and an increasing craving for radicalizing hyper-partisan content (Jackson, 2018). When misinformation aligns with how the audience feels or thinks about a certain topic, the subsequent validation gratifies the audience and captures their attention. Misinformation that arouses strong negative or positive emotions within the audience successfully pulls the audience in, which otherwise may not have occurred without such emotional triggers. Lastly, hyper-partisanship as a product of increasing levels of distaste for those who oppose the political viewpoints of the audience has made divisive content that serves as a detriment to those opposing political viewpoints highly desired by audiences.

Social and Political Landscape

Social conditions also play a part in facilitating the spread of misinformation. Part of this divide that has become more apparent in recent years is in part due to the political and social atmosphere that misinformation tends to thrive in. When politicians, media organizations, private foundations, and other social elites are politically polarized, people are more likely to believe misinformation for reasons we discuss in the next chapter (Flynn et al. 2017). Consequently, political polarization could cause more people to share misinformation as well. This effect would be further exacerbated by partisan echo chambers. In today's American social landscape, polarization is one of the primary threats to a functioning democracy. Media consumption, for those most interested in

politics, tends to be centered around finding sources that reaffirm already held beliefs. In our heavily polarized social and political landscapes, finding a tie that binds are usually difficult, and an area that used to be unquestionably consumed was the insights gleaned from local newspapers. A local newspaper used to have the ability to “show you how you’re related to people you may not know you’re related to”, but that community shared interest is going away at alarming rates (Abernathy, 2018). Thus, the decline of local news and the expansion of news deserts can create further social and political division.

The Role of Media in a Democratic Society

Each of the factors we just discussed contribute to the spread of disinformation. The rise of the digital media landscape, the decline of traditional journalism, the ease of creating content online, the potential benefits of creating misinformation, and hyper-polarized politics all play a role. But why is disinformation having such a powerful impact on our society? The answer to that question lies in just how important the media is to our democracy.

In our society, people depend on the media for information about the world around them, especially when it comes to politics. The news media can raise awareness about urgent issues that require a public response (Zaller, 2003). News reports can also help audiences interpret events and connect individuals to form politically active communities (Nielsen & Fletcher, 2020). After learning about a concerning event in the media, people who care can rally together and affect change. Furthermore, investigative journalism has been shown to reduce corruption, promote government efficiency, and

keep elected officials accountable (Nielsen & Fletcher, 2020). A well-informed public is vital for a healthy democracy, and that public relies on the news media to be informed.

Consuming media does more than just keep people informed about the outside world, though. In fact, it can even influence how we feel about ourselves and others. Research shows that negative portrayals of refugees in media can lead to more negative attitudes toward refugees, especially if audience members are shown a person like themselves in conflict with a refugee (Schemer & Meltzer, 2020). Similarly, when media outlets depict Black people in a bad light, audiences become more likely to believe harmful racial stereotypes. This can also reduce the self-esteem of Black audiences. On the other hand, more positive portrayals and increased representation can improve Black audiences' self-worth (Stamp, 2021). These feelings about ourselves and others can affect which policies we support and which political candidates we vote for.

On top of that, the news media helps to inform our perceptions of politicians and institutions. Consuming media can increase our motivation to participate in politics, or it can make us distrustful and cynical. A lot of research shows that news media coverage of politics makes audiences more likely to believe the system is corrupt and that politicians only care about winning. However, other studies show that reading the newspaper results in greater political knowledge, more trust in our institutions, and increased mobilization. Whether or not we trust the political system is important – our governments depend on our faith to function effectively. Of course, too much trust in government can allow people to be manipulated, but too little trust leads to a breakdown in making policy. Furthermore, political trust helps to support a stable democracy

(Echeverría & Mani, 2020). The problem is, trust levels in the United States have been falling for over 30 years. This makes the media's effect on trust even more important to consider.

Democracy is at its best when members of the public bring together diverse perspectives to decide on the best course of action. When those perspectives are shaped by false information, though, the democratic process suffers. People who believe falsehoods might advocate for counterproductive or even harmful policies. Research has shown that being misinformed has a significant impact on a person's political beliefs. In fact, it's better to be completely uninformed about a topic than misinformed – an ignorant person can recognize their shortcoming and then form opinions based on what they *do* know (Brown, 2019). However, when people turn to the media for information about the world, disinformation has the chance to create false beliefs.

Disinformation also has serious ramifications for how we see other people. We could form harmful stereotypes about others, based completely on wrongful assumptions. Hearing fabricated stories about immigrants committing crimes, for instance, could make people believe most immigrants are dangerous. Furthermore, some disinformation campaigns use false claims alongside insults and striking imagery to portray certain people as evil or immoral. Professional journalists and politicians are common targets of this strategy. Another tactic used by disinformation campaigns is the use of fake social media accounts that mimic real people. These bad faith actors infiltrate political groups online and post exaggerated opinions, hoping to create division. This strategy also increases distrust between users as it becomes harder to tell whether

somebody is a “bot” (McKay & Tenove, 2021). Thanks to the role of the media in shaping our perceptions, disinformation has the power to make us less compassionate, less cooperative, and less trusting.

Finally, disinformation is harmful to the functioning of our democratic system itself. Research shows that disinformation campaigns aren’t designed just to sway elections, but to undermine the stability of democratic institutions. Disinformation actors try to discredit traditional journalists and trusted scientific organizations to make the public cynical towards the truth. Their end goal is to make people feel like all sources of information are motivated by partisanship and cannot be trusted (McKay & Tenove, 2021). By sowing distrust and cynicism among the public, disinformation campaigns can make democracy start to break down. As a result, our government loses legitimacy and cannot perform the way it should.

Our society relies on the media to provide dependable information. When working correctly, the media helps us make sense of the world and each other. We also depend on the media to facilitate political participation and democracy. Disinformation throws a wrench into all of this. False information spreads faster than truth, and the amount of disinformation increases during major political events like elections (Brown, 2019). As a result, our democracy suffers. Disinformation creates division and conflict while hurting our ability to make sound policy. The ironic thing is, disinformation spreads using the very freedom of expression that makes for a healthy democracy in the first place.

The steady decline of local and print news has given birth to an unprecedented explosion of different mediums that have changed our way of consuming information. The social media phenomenon has allowed anyone with the right type of access to be a creator and post whatever they wish. These social conditions allow misinformation to spread. We are all susceptible to misinformation, no matter how educated, open-minded, well-rounded we are because our personalized information does in some sort of way have bias. Which leads to the next question, “Why do people fall for misinformation?”

Chapter 4

Introduction

Even if we understand how misinformation is created and spread, it can be hard to see why millions of people fall for it. In 2010, a Pew Research Center poll found that eighteen percent of respondents believed that President Obama is a practicing Muslim. This equates to nearly one in five Americans being misinformed about the President's religion, including three in ten Republicans and one in ten Democrats (Pew Research Center, 2010). In truth, President Obama attended both Islamic and Christian schools as a child and chose to join the Trinity United Church of Christ as a young adult (Associated Press, 2007). Various media outlets contributed to the fiction about Obama's faith, but how did so many people accept it as truth? This chapter explores how misperceptions take hold.

Cognitive Factors

Directionally Motivated Reasoning

The mind plays a crucial role in explaining why people come to believe misinformation. Our brains are far from perfectly logical – human rationality has its limits, after all. In fact, our minds can be influenced by a variety of irrational psychological factors that affect how we think. As a result, sometimes people process information in ways that lead to illogical conclusions.

One of the most powerful causes of belief in misinformation is directionally motivated reasoning. This type of thinking, also called partisan motivated reasoning,

happens when people process new information with a desired conclusion already in mind. When people come across new information, they try to make it fit with their existing beliefs. If that new information doesn't align, people internally counterargue it. Directionally motivated reasoning also causes people to better remember information that supports their beliefs and consider that evidence to be more convincing (Flynn et al., 2017). For example, an environmentalist watching a documentary about coal mining might use directionally motivated reasoning to conclude that coal shouldn't be used. That person would interpret the facts to support what they already think and counterargue evidence that favors coal mining. Directionally motivated reasoning can be contrasted with accuracy-motivated reasoning, which happens when a person tries to reach the most "correct" conclusions. The type of reasoning somebody uses can vary depending on the subject matter, setting, and whether they have been primed towards one motivation or the other (Flynn et al., 2017).

A variety of factors can cause somebody to use directionally motivated reasoning. These influences usually operate subconsciously, leading people to use motivated reasoning without realizing it. Higher levels of political knowledge and education, for one, can make people more likely to process information with a particular slant. Another cause is political polarization – if party leaders are strongly divided on an issue, members are more likely to directionally interpret new information on that topic to align with their party. In fact, a person's identity and group belonging can have a major impact on directionally motivated reasoning. Interpreting information to support one's preexisting beliefs can strengthen feelings of belonging, and people can reject conflicting

information that appears to threaten their identity. On the other hand, sometimes a person's identity can reduce directionally motivated reasoning. People who disagree with their political party's position are more likely to interpret information neutrally, and so are people who aim to be "good citizens" (Flynn et al., 2017).

Directionally motivated reasoning poses a problem because people become more likely to believe misinformation when it fits their existing beliefs. Instead of critically evaluating potentially false information, people using directionally motivated reasoning could accept misinformation without question. Furthermore, directionally motivated reasoning could make people reject truthful corrections that clash with their desired conclusions. By biasing the way people process information, directionally motivated reasoning can allow misperceptions to take root.

Cognitive Capacity

Cognitive capacity also affects whether a person comes to believe misinformation. The human brain tends to process information in two different ways: System 1 and System 2. In System 1 thinking, the mind works quickly and efficiently using shortcuts, but this sometimes comes at the cost of accuracy. People often use System 1 thinking automatically when processing new information. However, when System 1 reaches a false conclusion, System 2 thinking can correct it. This slower, more logical form of processing requires more effort, but using it can make us reconsider our gut reactions from System 1. When people use System 2 thinking to reconsider their initial System 1 conclusions, they are performing cognitive reflection (Stecula & Pickup, 2021).

Misinformation becomes more believable when people process it using only System 1 thinking. Conspiracy theories in particular appeal to peoples' emotions and intuitive reactions, making those ideas easy to accept using System 1. In addition, the brain processes images and videos faster than words, most likely using System 1 thinking – this can allow misinformation to spread more effectively through visual mediums (Stecula & Pickup, 2021). If people never stop to perform cognitive reflection, they'll be at risk of believing misinformation at first glance.

Actively utilizing System 1 and System 2 methods of thought when consuming media can help us evaluate the information we are consuming. However, with modern media platforms fostering a multilateral hub of misinformation outlets, it is critical to understand the impact of information seeking vs information avoidance. These two terms when paired with the understanding of System 1 & 2 thought processes can be the most effective tools to navigating the mass exposure of misinformation we are faced with.

Information seeking refers to intentional seeking of information, both actively and passively (Griffin et al., [1999](#); Kahlor et al., [2006](#)). Conversely, information avoidance refers to “any behavior intended to prevent or delay the acquisition of available but potentially unwanted information” (Sweeny et al., [2010](#), p. 341). Information avoidance in itself does not directly relate to the level of exposure to misinformation, but avoidance of information also means avoidance of further research. Individuals practicing information avoidance are more likely to be influenced by incidental exposure as opposed to those actively seeking information (Hwang & Jeong, 2021). On the other

hand, those intentionally seeking information often utilize heuristic processing methods and System 1 thinking (Chaiken, [1980](#); Eagly & Chaiken, [1993](#)). As a result, people seeking new information often accept it quickly and without question. While those who avoid information avoid further research, those seeking information often accept misinformation thanks to System 1 thinking and directionally motivated reasoning. These two tendencies highlight just how complicated it is to dissect misinformation and avoid its influence.

Emotionality

Emotionality can also make people more susceptible to misinformation. Feeling emotional makes it harder to differentiate between truth and falsehood and relying on emotions when processing information makes people more likely to believe misinformation (Martel, Pennycook, & Rand, 2020). More specifically, studies have found that anger increases the use of directionally motivated reasoning, leading angry people to become close-minded and only accept new information that aligns with their existing beliefs. Meanwhile, anxiety decreases the influence of partisanship when processing information and makes people more likely to learn political information. This isn't always a good thing, though. Feelings of anxiety make people doubt themselves, so misinformation that clashes with their beliefs becomes more convincing (Weeks, 2015). The information we consume can sometimes provoke emotional reactions like anger or uncertainty, which opens the door for misinformation.

Misinformation in the Real World

Severity

As discussed, there are a multitude of causes that lead to individuals believing false information that is presented to them, but the severity of belief is something that still needs to be accounted for. When looking at misinformation it is important to differentiate the average person who is affected by misinformation and the outliers who are extremely affected. Misinformation affects everyone. From grade school to grad school no one can avoid it. Most people, though, believe only small amounts of misinformation. It may be a non-malicious rumor about a politician or celebrity with the rumor having no merit or importance. Additionally, some other forms of basic everyday misinformation that people face may include an unknown falsity being spread about an upcoming movie or someone sharing a satirical news article believing it to be true. Although minor forms of misinformation run rampant and affect everyone, these forms are relatively harmless compared to the more extreme and malicious forms of misinformation. Some examples of the more dangerous forms of misinformation include vaccination misinformation, Holocaust denial, and conspiracy theories. These types of dangerous forms of misinformation have led to increased deaths during the Covid-19 pandemic, heightened rates of political partisanship, and greater mistrust in the news media.

These far more dangerous forms of misinformation are often based on blatant lies and malicious misinformation that plays on people's emotions, mental health, and socioeconomic position. Psychologists, sociologists, and researchers in other related

fields have been looking into what makes one person more likely to believe blatant misinformation than others. These academics study the process of conspiratorial ideation, or how people come to believe conspiracy theories. Those who have a higher rate of conspiratorial ideation are more likely to not only believe in more misinformation but also are far more likely to believe in more extreme misinformation. While investigating how conspiracy theories take root, researchers found that certain psychological aspects play a role in a person's conspiratorial ideation. For example, one study found that those who faced great insecurity, live in hyper-partisan areas, or those who lived in a more impoverished area happen to be at greater risk for falling for the more extreme types of misinformation (DiGrazia, 2017).

While believing malicious misinformation is influenced by people's socioeconomic status and mental health, those who are already vulnerable to conspiratorial ideation and misinformation are being targeted by the media sources as well. Modern news media, especially those that have a focus on social media, often exploit emotions and instant reactions to get views and retain consumers. These tactics appeal to System 1 processing, as discussed above. Studies have found that frequent users of social media sites like Facebook and YouTube are more likely to believe in conspiracy theories unless they engage in cognitive reflection to correct their initial conclusions (Stecula & Pickup, 2021). Because of how information on social media plays to our emotions and gut reactions, the digital world has become a breeding ground for believing in extreme misinformation.

Combating Misinformation

Now that the psychological and environmental factors for why people fall for misinformation have been examined, we can now look to analyze the primary methods used to prevent the spread and consumption of misinformation. The following will discuss the role fact checking, debunking, prebunking, content moderation, and deplatforming play in the prevention of misinformation. Essentially, fact checking is the process of reviewing statements made on various forms of media and then determining the validity of said statements. Debunking is often a tool employed by fact checking agencies. Effective debunking, according to the *Debunking Handbook* from climatechangecommunication.org, is reliant on two things: “[p]roviding a clear explanation of (1) why it is now clear that the information is false, and (2) what is true instead” (Lewandowsky et al., 2020). This means that true debunking goes beyond classifying information as false. It also requires the truth to be provided to the consumer (Lewandowsky et al., 2020).

While fact checking in the form of debunking is beneficial in the fight against misinformation, alternative solutions that work to get out in front of misinformation also exist. This solution is often referred to as prebunking. According to *Psychology Today*, prebunking refers to “... the process of debunking lies, tactics, or sources before they strike.” (Nolan, 2021) For instance, this could entail a variety of public service announcements that would work to alert the public that misinformation regarding a certain topic is likely to be spread on certain platforms. Moreover, prebunking includes the spread of factual information in general to hopefully equip the public with the

knowledge needed to identify misinformation themselves. The ability of the public to effectively separate fact from fiction within the media they consume is known as media literacy. Media literacy is an essential component of both prebunking and debunking because each relies on the consumers' ability to acknowledge the truth being presented by the fact checking agencies.

Now that fact checking and prebunking have been clearly defined, we can now look to the primary agencies responsible for conducting fact checking. A common form of fact checking comes via non-media affiliated websites that look to spread factual information regarding mainstream news. Some of the more recognizable of the websites include FactCheck.org, Politifact, and Snopes (St. Louis Community College, 2021). Snopes is widely regarded as the initial fact checking websites and analyzing its services provides great insight into the fact checking industry (St. Louis Community College, 2021). The company started in 1994 with the founder David Mikkelson and his wife working together primarily on debunking hoaxes, urban legends, and folklore (St. Louis Community College, 2021). As access to the internet continued to grow, Snopes began to hire more employees and began to shift its focus towards more mainstream news. Now the website offers a blueprint for other fact checking organizations and remains one of the more useful online tools for researchers (St. Louis Community College, 2021). Aside from independent websites social media platforms also have fact checking services. Third party fact checking organizations work collaboratively with social media platforms and search through posts looking for misinformation. Once said misinformation is found the fact checking agencies will advise the platforms to take

various actions including deplatforming and moderation (St. Louis Community College, 2021).

One of the methods by which fact-checking occurs on internet-based information sources is through content moderation. Content moderation takes place when online platforms “...screen and monitor user-generated content based on platform-specific rules and guidelines to determine if the content should be published on the online platform, or not” (Besedo 2021). This moderation is done by either human or A.I. moderators. Moderation by humans is becoming less common due to the inefficiency of manually screening massive amounts of user-generated content. To illustrate, human Facebook moderators process over 3 million instances of reported content each day. The sheer quantity of content to review leaves each content moderator unable to thoroughly review each post, picture, and video that gets reported. As a result, an NYU Stern report found that Facebook moderators make the wrong decision for one of every ten pieces of content, or about 300,000 mistakes a day (Koetsier, 2020).

Alternatively, A.I. (Artificial Intelligence) moderation uses “machine learning models built from online platform-specific data, to efficiently and accurately catch unwanted user-generated content,” and is able to “take highly accurate automated moderation decisions – refusing, approving, or escalating content automatically” (Besedo 2021). Essentially, A.I. moderation is capable of screening information more efficiently and effectively than humans can. However, A.I. moderation has its flaws, too. Computer algorithms cannot always distinguish between facts and misinformation, causing the A.I. to even remove content from reputable sources (Koetsier, 2020). Until A.I. moderation

systems sufficiently improve, we cannot rely on machine learning to police online content.

It is important that internet companies create guidelines for human or A.I. content moderators that identify and take action against misinformation in order to be effective at fact-checking. When there aren't clear parameters for discerning truthful information from misinformation, content moderation is ineffective at fact-checking and allows for harmful consequences. For this reason, there is discussion of having those parameters determined by governmental bodies rather than web companies themselves because businesses tend to determine guidelines for information sharing that benefit them, but not society as a whole (Gillespie et al, 2020). However, some critics object on the grounds that government rules for content moderation are a form of infringement upon free speech. Finding an effective yet fair method of content moderation is absolutely vital for a healthy information ecosystem.

The most extreme form of content moderation is an action known as deplatforming. When deplatformed, that user is entirely prohibited from speaking or posting on the relevant social media site. Often deplatforming is employed by large internet companies when an individual or group intently shares wrongful and/or harmful information or otherwise violates terms of service. It is often considered to be an effective action in restricting the spread of misinformation by extremists. However, there is criticism of both the efficacy of deplatforming as well as the potential harm for the removal of such content. One major issue with deplatforming is that often deplatformed users resort to alternative public forum websites where misinformation is

all that is present. By not being allowed to be shared in a space where there is contradictory information, misinformation exists in spaces where it is accepted and confirmed without any discourse. This absence of discourse adversely affects critical social media research regarding misinformation and its effect upon mass audiences (Rogers, 2020). So, although deplatforming may seem to be an effective solution for preventing the sharing and spreading of misinformation, it adversely affects the ability of online consumers to critically analyze and deconstruct information. That resorts in further disintegration of the public's ability to discern truthful information from misinformation because there is no visible dialogue to show why the information shared by deplatformed users is incorrect.

Chapter 5

Introduction

Misinformation exists in the world today and has many negative consequences. Because of this, it has become important for media consumers to learn how to spot misinformation and what actions they can take against it. This chapter will discuss spotting misinformation in mainstream media and social media, as well as addressing what can be done to combat misinformation both in the long term and the short term.

How to Identify Misinformation

Mainstream Media

Misinformation can be found in all forms of media in both traditional mainstream media outlets and social media platforms and can lead to several lasting consequences. Identifying accurate news from misinformation in the media is one of the more difficult things to do in terms of filtering false information and making distinctions between what is true and what is not. Many users approach news on social media platforms with a degree of caution and skepticism because of the prevalence of misinformation and the general lack of oversight or fact checking. This is due in part to the lack of gatekeeping that exists across social media platforms, meaning there is little authority and regulation in what gets posted on social media. Short of posts that fall outside of company guidelines, users have free reign to post what they please with no vetting process that determines validity. Mainstream media outlets have more extensive processes of gatekeeping and determining what information to present to the public with higher

factual accuracy. However, mainstream media and news networks can provide a different challenge in terms of differentiating misinformation because of a presumed degree of trust and a higher standard of accuracy compared to social media “news”. Many of these mainstream media sources are considered credible for audiences across the country, so when they perpetuate misinformation, it occurs on a much larger scale than any social media platforms and can lead to misinforming millions of audience members at a time.

Misinformation found on mainstream media can be difficult to distinguish from accurate information due to the nature of trust and faith placed within large news networks. While many of us have the expectation that mainstream media sources will always provide accurate and correct information, this is not always the case. Due to fierce competition amongst media outlets, there have been instances where news networks have prioritized being one of the first to report on a significant event, even if all of the facts are not yet known to them. Large events that demand media attention can often be framed in ways that aim to gain the attention of viewers in a way that is more gravitating than other news sources. This has led to stories being rushed and taking advantage of viewer’s partisanship and dispositions to have a more attention-grabbing story. This can lead to stories being underdeveloped or false when they hit the air.

An example of this occurred in 2013 when CNN falsely accused two men of the Boston Marathon bombing and continually reported based on unverified facts and speculation in an attempt to be the sole live coverage of the event. This habit of being fast rather than accurate has caused many news networks to release corrections to

previously released stories, and not all audiences are able to view the less widely broadcasted corrections. An example of news corrections or redactions occurred in June of 2017 when CNN wrongly accused Anthony Scaramucci, the former White House Communications director, of having connections to a Russian investment fund. They later retracted the article, but it was already in the minds of the public. CNN made similar mistakes in 2017 surrounding the Trump administration, often providing inaccurate timelines of events (ex. Regarding the emails sent to the Trump campaign from Wikileaks). Even though most of these stories are later corrected or retracted, the corrections do not always reach audiences that initially got their information from an inaccurate story. Retractions are rarely announced or promoted in a similar way that initial stories are, which means that they rarely get seen by as many news consumers.

According to Bridgewater State University, outside of these biased and potentially misleading framing of information, one of the most common ways that people consume misinformation from the mainstream media is by being tricked into thinking they are on an actual mainstream media site when they are on an illegitimate copy. This process is known as mimicking. It is when a website mimics or imitates legitimate news sources and creates headlines, articles, and even hyperlinks that can be found on legitimate sites by way of advertisements or suggested sites. These sites that use mimicry have been the source for a large amount of misinformation reaching the public under the guise of the news networks such as CNN, ABC or FOX. They use similar domain names, logos, designs, and color schemes to trick people into thinking they are consuming media from internationally renowned sources. For example, abcnews.com.co uses the same website

design and logo as ABC News. However, closer examination would reveal that there are hyperlinks to sources that lead to nowhere, little to no publisher information, and stories that are not grounded in fact or credible. Unfortunately, few people look to publisher information when digesting an article that is potentially shocking or disturbing or relevant to current events. Mimicking can also occur in instances that are outside of imitating national news outlets. Due to the relatively high trust in local news compared to international and national news networks, proctors of misinformation take advantage of this trust by imitating local news sources. They don't necessarily need to present themselves as a local source in the area, but just as a news network that would fall into the category of local. This attacks a specific demographic that relies solely on local news and does not have complete awareness of how to spot misinformation or fake sites.

There are a number of ways to differentiate these fake news outlets from the real ones. According to a study conducted by Visual Capitalist, an online publishing company that covers economic and related topics, these are the most effective ways to spot potential mimicked sites or misinformation in the mainstream media. When approaching a news platform, viewers should ask themselves the following questions:

1. Is it meant to be intentionally misleading? (Parody, Satire) (For example, The Onion, Babylon Bee, etc.)
2. Are there potentially false connections or misleading content? Connecting stories with headlines, photos, or media irrelevant to its content (gains attention, establishes immediate impression of an issue)

3. Does the hyperlink have any extensions? (.com.co, www2, .net.co, etc) This can be confirmed with a quick search of the actual source's official site.
4. Are there signs of biases or intended audiences the source could potentially be targeting in a positive or negative way?
5. Make sure that the text uses references and matches the headline and abstract that most people can read quickly- checking hyperlinks and references embedded in the article

In terms of checking the validity of platforms such as cable news or stories that come straight from verified sources, viewers and audiences should follow these guidelines to ensure the information they're receiving is up to date and accurate.

1. Continually check for updates on developing stories
2. Check alternative sources for inconsistencies and cross reference information
3. Consider intended audience/potential biases (language such as "death tax" vs "estate tax, "undocumented worker" vs "illegal alien", etc.)

Social Media

With a basic understanding of how to spot misinformation in mainstream media, knowing how to spot misinformation on social media is the next step in becoming an informed citizen. Social media has completely transformed how information is shared and who can create news. With this has come more equitable access to opportunities and information, but unfortunately, the trade-off has been more potential exposure to misinformation. Our heavy reliance on digital devices makes us particularly vulnerable.

Pew Research Center found that in 2021 86% of adults in the U.S. got their news from smartphones, 53% of all Americans got their news from social media (Shearer, 2021). Since social media platforms serve as the main source of news for most of the population, viewers who believe everything that they are reading on Facebook and other platforms as truthful news is dangerous and can create confusion and chaos. Since it is inevitable to encounter misinformation while scrolling through social media, it is important to recognize the false information and to report the post to prohibit the further spread of misinformation.

Figure 10: Various sources of Americans news consumption

Due to this heavy reliance on social media as a form of news, unique challenges have risen in regard to spotting misinformation on the various platforms. Dr. Donna Gregory, a senior lecturer within the School of Nursing at Regis College, offers three general tactics for spotting misinformation on social media which include: understanding who is posting it and their qualifications or biases towards their post, the intent behind the information they are sharing, and fact-checking (Suciu, 2021). Due to the array of social media platforms, it is crucial to understand the unique challenges that each pose in

the spreading of misinformation and if general tactics work on combating misinformation on all social media platforms. Each social media platform looks different, but for forums that mainly rely on writing as the avenue to convey information such as Twitter and Reddit, there are specific steps that can be taken to know how to identify information.

Written Misinformation

A specific avenue that misinformation can be spread is through bots. Bots, which are defined as “automated social media accounts which pose as real people” hold real power on platforms such as Twitter and Reddit (Digital Forensic Research Lab., 2017). These bots are run by automated software that posts content on anything from politics to entertainment, or photography to amplify a message. As threatening as these bots may appear to be, there are clear tactics to identify bots. By monitoring “activity, anonymity, and amplification” (Digital Forensic Research Lab., 2017).

Here are common attributes of bot accounts:

- Number of posts is above human capacity
- Minimal information regarding identity (handle, name, profile picture, location):
- Non-original Posts (a surplus of retweets, headline quotes, or non-original content)

The consequences of bots can have real world impacts. On Reddit, the infamous WallStreet Bets discussion forum which created the GameStop investment frenzy has reported that bots are “responsible for a ‘large amount’ of the stock recommendation content being posted” (Gandel, 2021). These recommendations can lead to real action

and repercussions — a serious threat to economic stability and individual financial decisions. Bots which impact mainstream social media platforms such as Twitter are also present in forums such as Reddit and 4chan — channels with a history of perpetuating conspiracy theories, that sometimes escalate to violence and crime. With these platforms, the type of content that is amplified by bots can be more aggressive and the implications more severe.

Figure 11: Examples of social media accounts likely ran by a bot

Figure 12:

In addition to bots, there are also real people who are both purposely and unintentionally spreading misinformation. On social media platforms that share primarily written information (such as Twitter and Reddit) share red flags that all users should be cautious about when consuming information. Common types of misinformation include conspiracy theories and sharing unreliable information are also avenues for misinformation to be spread. Reddit subcommunities can isolate and spread conspiracy theories without hindrance of unbiased moderation and Twitter users can share information from unreliable sources without third-party fact-checking (Finkel et al., 2017). While these actions start with an individual, there can be real consequences. For those unsure about the reliability of the content they are saying, irrational logic, shady sources, and evidence of motivated reasoning can all be evidence that the information should not be viewed as legitimate.

In addition to the challenges that Reddit and Twitter pose, other social media platforms such as Facebook, Instagram, YouTube, and TikTok come with their own unique challenges due to their potential to spread misinformation to the masses. This section of the chapter will examine Facebook, Instagram, TikTok, and YouTube to determine how to spot misinformation on different platforms and what the platforms are doing about it.

Facebook acknowledged the issue of misinformation on their platform in a News Feed on April 7, 2017 (Mosseri 2017). In this News Feed, the Vice President addressed the role Facebook plays in combatting the spread of misinformation on their platform.

Facebook had committed to disrupting the financial motivations through economic incentives, using new products to reduce the spread of misinformation, and providing resources to inform consumers on what to do when encountering fake news (Mosseri 2017).

Figure 12: False information warnings on Facebook (L) and Instagram (R)

These initiatives support Facebook's goal in fighting false news, but in addition to these steps, Facebook also provides steps that users can take to avoid misinformation on their platform. The Help Center at Facebook partnered up with The News Literacy Project, Arizona State University, and Stony Brook University School of Journalism to create ten tips for users to limit the spread of misinformation that include:

1. Be skeptical of headlines because fake news typically has headlines that are caught with many caps or exclamation points.

2. Check the links because a phony link can be a warning sign. False news sites can attempt to make slight changes to a link to make it look like a real news story, try to compare links to establish if the source is credible.
3. Check the source to see if it has a reputation of accuracy, you can do this in the about section.
4. Pay attention to unusual formatting, which can include misspelling and awkward layouts.
5. Look at the photo because false news stories can manipulate a photo or video or take it out of context. They recommend the user searches for the video or photo to verify its origin.
6. Inspect the date because the timeline and dates could be altered.
7. Checking the evidence by looking at sources to ermine the accuracy.
8. Look up reports and see if others are reporting the same thing, if not it is likely fake.
9. Ask yourself if this might be a joke. Check to see if the source is known for humor or satire.
10. Think critically when reading stories and share the news you know is credible (Facebook Help Center).

In addition to Facebook's tips, The University of West Florida has come up with a guide to Fact-Check Like a Pro (University Libraries, 2021). They have created the CRAAP test, or the currency, relevance, authority, accuracy, and purpose test. Currency requires the user to determine if the story is current because many times social media

platforms such as Facebook can have posts with dates that are from a long time ago. Relevance encourages the user to determine if the claims being made are appropriately backed by the reliable research required to make their claims. Authority requires the consumer to examine if the poster has the criteria to be knowledgeable on the topic they are posting about. Accuracy asks the reader to analyze if the evidence supports the claim. Finally, purpose requires the reader to determine the purpose of the post to determine why the poster is putting it on the internet (University Libraries, 2021). CRAAP helps users take a critical approach as a consumer of information to aid readers in avoiding being misled by misinformation.

Misinformation regarding COVID-19, vaccines, and the 2020 U.S. election highlighted the breadth of deceitful information circulating around Instagram. This resulted in Instagram releasing an article on December 16, 2019, explaining how they expanded their fact-checking program to allow fact-checking organizations to check the misinformation on Instagram globally (Instagram, 2019). To achieve this, third party-fact checkers will be used to rate posts as false or partly false and then removing the explore and hashtags associated with it to limit its spread. In addition, the post will be labeled so that the user can make the decision to interact with the post or not. Facebook owns Instagram, meaning that their ideals around misinformation align closely which has resulted in Instagram working with Facebook to label posts on Instagram if it has been spotted as false on Facebook. This partnership will go both ways to help reduce misinformation spreading on social media (Bond, 2021).

Visual Misinformation

YouTube and TikTok have offered a different form of misinformation in both video and audio. Based on the Institute for Strategic Dialogue, 124 TikTok videos highlighting vaccine misinformation received more than 20 million views and 2 million likes, comments, and shares (Zadrozny, 2021). On YouTube, algorithms were suggesting “white supremacist rants, Holocaust denials, and other disturbing content ... potentially helping to radicalize billions of people” (Nyhan, 2021).

TikTok and YouTube have offered a new form of misinformation in both visual and audio formats which have necessitated a different response than what has been used on other social media platforms. Back in 2019 Google, YouTube’s parent company, acknowledged this issue and has announced a new campaign to remove objectionable content and limited them from being recommended (Nyhan, 2021). In addition to this, YouTube announced their strategy to combat misinformation on their platform in an article “How does YouTube address misinformation?” (YouTube, 2021). YouTube explained how they use the “4 Rs” principle: remove content that violates their policies, reduce reconditions on borderline content, raise authoritative sources of news, and reward trusted creators (YouTube, 2021). TikTok offers an additional challenge to combating misinformation due to the feature that allows users to use others personal audio on their own video, meaning that some false content can continue to spread through sounds and viral trends (Culiford 2021).

Figure 13: Example of a doctored video

In a CNN article, *Is that Video Real?* the author explains several tactics to tackle misinformation in video format (Willingham 2020). First, manipulated video is all around us and has been for a while, but technology has allowed it to get better and more convincing. AJ Willingham explains how there are two types of this which include cheap fakes and deepfakes. Cheap fakes are classical video editing which include speeding or slowing down the video or combing videos, deepfakes are videos altered by artificial intelligence (Willingham 2020). To avoid misinformation in videos Willingham suggests users focus on natural detail like how someone is blinking their eyes because AI has a difficult time replicating it naturally. Make sure things match, for example look to see if things look pasted on. Listen to the cues, such as playback being slower in certain parts. Lastly check the metadata, which means to check the embedded data (Willingham 20202). While these strategies may differ from the basic strategies to approach written misinformation, there are still tactics users can take to help determine if the content is real or fake on audio and visual oriented social media.

Solutions to Information Disorder

Long Term Solutions

This section will identify some possible long-term solutions to combat Information Disorder. Because misinformation relies heavily on the technology mediums that it is spread across, any long-term fixes will need to address issues with technology as we know it today, but also attempt to account for technological innovations yet to come as new tech continues to advance at a rapid pace. Any approach that fails to take into consideration new, cutting-edge developments in the tech world that have not yet been made available on the consumer market are doomed to be outpaced by bad actors spreading disinformation that will continuously exploit new opportunities. Long-term solutions will always be inherently challenging to produce because the future is impossible to predict. However, by targeting tactics currently employed and likely to remain part of disinformation campaigns while also keeping dynamic, rapidly evolving approaches to new technologies, long-term campaigns can and will be successful in their fight against Information Disorder.

While bearing the future in mind is important, there are long term actions that can be implemented today to help against misinformation. Finland, which has been considered “Europe’s most resistant nation to fake news” has added “multi-platform information literacy” and “critical thinking” as key components of their curriculum across an array of subjects (Henley, 2020). For example, their math classes demonstrate how statistics can be used to advance a lie and in art they show how an image’s meaning distorted (Henley, 2020).

The United States currently ranks low in media literacy, and thus academic and curricular changes could represent a key component to combatting misinformation (Carr, 2021). To achieve this change, the US could implement curriculum changes like the ones made in Finland to help its citizens be less susceptible to misinformation. While the American educational system may be more decentralized than in Finland, laws such as the *No Child Left Behind Act* show that radical nationwide educational reforms can and do start at the federal level (Executive Summary of the No Child Left Behind Act of 2001, 2001). While freedom of speech battles may limit the effectiveness of changes at a platform level, changes to the way we consume information will prove to be essential to overcoming misinformation.

In addition, long-term solutions must also prepare for technology that is not yet at the consumer level but could have massive implications for the spread of misinformation in the future. For example, targeted disinformation campaigns currently rely heavily on human authors to curate and spread misinformation, which often works to their detriment and helps to expose them as disingenuous. In the future, computers will all but certainly be able to generate articles that sound as though they were written by a person, but in reality received little or no human input (DiResta, 2020). In June 2019, OpenAI, an artificial intelligence research lab, released the beta version of a software that does exactly that. While this software is not yet available to the general public, if it or any similar service were to be utilized by a state-run disinformation unit such as Russia's GRU, then they would essentially have an unlimited amount of misinformation

material without the need to worry about exposing themselves through planarizing bits of a real person's writing (DiResta, 2020).

Computer generated articles in tandem with so-called “deep fake” videos, or videos that are doctored to make it look as though someone is doing or saying something that they did not, demonstrates just one of the ways that technology will make spreading misinformation easier, not harder, in the future. While we obviously cannot have solutions to technology that we do not currently have access to or has not yet been created, it nevertheless shows that the fight against Information Disorder is one that cannot get complacent and will always need to be anticipating the exploitation that is ultimately inseparable from innovation.

Short Term Solutions

There are societal and individual responsibilities to combat misinformation that can be implemented in the short term. When addressing societal responsibility, one solution that social media platforms could execute is to fact check what is being posted. This has been called “expert fact checking” by some sources, and it would entail having experts' vet the information that is showing up on social media and notifying users of the quality of the information (Tretheway, 2019). This would allow individuals to make the decision if they wanted to see the information, but it would provide them with all the necessary information about the quality of information. Some of this has already started happening. Twitter has already started placing warning labels on certain Tweets (Bond, 2020). If social media platforms were to aid in vetting the information that their users are

seeing, it could help fight misinformation spread in the short term, but people will likely find a way around it, and it will not serve as a long-term solution.

On an individual level, there are resources and actions that can be utilized to filter misinformation out of people's lives. There are websites and tools that people can use to check the reliability of the sources that they are using to retrieve information. One of these tools is called NewsGuard. This site rates websites based on their credibility and transparency. It uses a code system to categorize websites based on their credibility and transparency. In addition, it will also identify websites that are satirical or websites that are considered platforms, meaning that the content is created by users (NewsGuard, 2021). If individuals utilize these tools to vet the information they are consuming, they will be less likely to come across misinformation. Allsides is another tool that can be used to diversify the perspectives and sources of information people interact with. This website provides balanced media coverage and media bias ratings for sources, allowing individuals to become less susceptible to the biases of mainstream media sources and more proactive about the potential for misinformation in their news (Allsides, 2021). Allsides has also provided a media bias chart for popular news organizations, shown in figure 5.

Figure 14: Graphic illustrating the partisanship of mainstream news sources

This figure can be used to address the biases and potential for mis- or disinformation amongst mainstream media, but also brings up another short-term solution that you can implement.

Diversifying your media diet is a great way of fact-checking on your own, as seeing the same subject covered by multiple organizations can help you avoid your own biases and get exposed to more perspectives. The action of receiving information from multiple sources, even if you have a favorite broadcast, inherently makes you rely less and less on large media corporations and makes you more able to recognize misinformation. Cross-referencing Figure 14 when reading mainstream news is important to diversify the biases of the news you read. For example, if you normally interact with the New York Times (left-leaning), trying to supplement that with articles of the same subject from right-leaning or neutral sources will help to ensure that you aren't taking misinformation hidden within news at face value because you agree with the

biases (Allsides, 2021). A responsible thing to do when it comes to navigating the internet and consuming information is to read the articles/news that attract you, but also read differing perspectives to make sure the information you're reading is not misinformation from a singular source.

Local news has remained a source of valuable and trusted information for many Americans. As national news has become more partisan, local news has remained focused on community issues and hasn't fallen into these national party politics. The problem with local news lies in the fact that it is dying, and with it the ease of reaching trustworthy news. "Without a source for local news, community members get most of their news from social media, leaving them vulnerable to mis- and disinformation" (Ardia et. al, 2020). To supplement the decline of local news and its effects, people can use other local sources for information that can help to solve the information vacuums that turn people towards national and social media news. The best place to obtain local news within a media desert is from your local government. Local governments have online resources that can be accessed by anyone and can inform you of the current focuses of the leaders of your community. In the case of the COVID-19 pandemic, for example, your local government's official website is likely to have a page dedicated to their actions in response to their community's pandemic situation or a space to search for information on this topic. In Fort Collins, Colorado, the local government website provides these resources with up-to-date information on local COVID-19 regulations, allowing residents the ability to access this information with ease (City of Fort Collins, 2021). While in a media desert, these government resources specific to your community enable the spread

of verifiable information and allow you to escape the misinformation held on social media and within national news.

Another opportunity that local politics has found in communities is in local online forums, such as Nextdoor, which allow community members to post information that they feel pertains to the community and should be acknowledged (Cornish, 2021). The localized nature of this acts as a barrier from some of the misinformation found on other social media apps like Facebook, but not all of it is eliminated. These forums should not be the only place that you get your local news because of the potential for misinformation being shared by members of your community, but these can be a good way of engaging with your community and seeing what issues the community members view as most important.

We've discussed the presence of misinformation in social media, but one important way that you can combat this in the short term is through reporting misinformation on social media when you spot it. Each platform has its own process for reporting misleading content that will be outlined below. It is important to learn how to report posts that contain misinformation because of the harm they can cause if this false information is consumed. By reporting these posts, social media platforms have the power to remove them which prohibits false information from circulating the internet and misinforming future readers.

Reporting Misinformation on Social Media

How to Report Misinformation on Instagram:

1. Click the three dots in the top right corner
2. Click “Report”
3. Click “False information”
4. Then click whether it is related to health, politics, social issues, or something else.

Figure 15: Breakdown of how to report misinformation on Instagram. Facebook utilizes a similar method.

How to Report Misinformation on Twitter:

1. Click the three dots in the top right corner
2. Click “Report Tweet”
3. Click “It’s misleading”
4. Then click why the Tweet is misleading.

Figure 16: Breakdown of how to report misinformation on Twitter

How to Report Misinformation on Tik Tok:

1. Click the arrow on the right side
2. Click the report flag
3. Click “Misleading Information”
4. Click “Submit.”

Figure 17: Breakdown of how to report misinformation on TikTok

How to Report Misinformation on YouTube:

1. Click the three dots below the bottom right corner of the video screen
2. Click the report flag
3. Click “Spam or Misleading”
4. Choose which type of spam or misleading content it is
5. Submit your report.

Going forward, it is important to implement these individual solutions to avoid being trapped within an echo chamber and susceptible to Information Disorder. To inspire change amongst your media habits, here is a list of 10 reminders that we would recommend you follow to be a responsible citizen.

10 Things to Remember in Order to be a Good Digital Citizen

1. Look for fact check warnings on social media
2. Utilize reliable local news sources
3. Avoid open forum / gossip disguised as local news
4. Pause and do further research before sharing on social media
5. Gather information from news sources that hold left, right, and moderate biases
6. Google Headlines that seem outlandish to see if other sources are reporting about the topic
7. Report Misinformation when you see it
8. Have healthy and respectful conversations with people that disagree with you
9. Utilize browser extensions that challenge and expand your social media algorithms
10. Read full articles, not just headlines

Conclusion

It is a reality that misinformation is a part of our society. While the scale of the problem is threatening, there is hope. If more citizens grasp what misinformation is and how they can address it, society can minimize the harm of misinformation. Although it is an active responsibility, knowing how to spot misinformation is crucial to the future of how we learn, communicate, and stay connected.

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