Preparing Societies for the
Modern Information Landscape

An IScann Group White Paper

*fore*word

The rise of social media platforms has promoted the flow of information and the fostering of connectivity and engagement across communities and societies.

In November 2021, the Aspen Institute's Commission on Information Disorder published a report highlighting the urgency of the impact of the spread of mis- and disinformation on societies.

IScann Group is pleased to present this white paper **"Preparing Societies for the Modern Information Landscape"**. The paper explores the use of disinformation and highlights solutions to mitigate and combat the impact of misinformation and disinformation on communities and individuals.

If we intend to address the impact of disinformation, we need to focus on the ultimate targets of disinformation: people. We believe a multi-faceted solution is needed to mitigate the impact of disinformation on societies. We need to get to the heart of the matter, not just address symptoms.

It is our hope that you find this white paper to be an enlightening resource in navigating successfully through the modern information landscape.

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Table of Contents

Summary

Politics

Discredit

Bots

Non-skilled state actors

Internet

Division

Skilled state actors

Undermine govt

Deepfakes

Social media

Uneducated

Power

Disinformation

In November 2021, the Aspen Institute's Commission on Information Disorder published a report highlighting the urgency of the impact of the spread of mis- and disinformation on societies. History has warned us repeatedly that we should not underestimate the threat disinformation poses. In this era of information proliferation, disinformation campaigns have never been cheaper, easier, and more targeted. Thanks to AI-based solutions like deepfakes and bots, skilled state and non-state actors can divide, undermine, and discredit without incurring much in the way of risk.

It is unrealistic to aim for the elimination of disinformation. Instead, we need to first understand why disinformation has such a profound impact, particularly on post-truth societies. Opposing sides no longer trust each other's facts and sources, empathy for alternative perspectives is in decline, the disinformation awareness gap is widening, and the attention economy rewards content that gets the most clicks, not content that prioritizes journalistic integrity. The challenge is finding tangible and realistic solutions that address these issues.

We know it is too late to stem the flow of disinformation, let alone eliminate it entirely. We also know that debating whether a piece of questionable information is true or false distracts us from the real question: What, if anything, is the intent behind a piece of information? If we really want to address the impact of disinformation, we need to focus on the ultimate targets of disinformation: people.

We believe a multi-faceted solution is needed to mitigate the impact of disinformation on societies. We need to get to the heart of the matter, not just address symptoms.

Background

In November 2021, the Aspen Institute's Commission on Information Disorder published a report highlighting the impact of the spread of false and misleading information on societies and providing detailed guidelines aimed at addressing the problem. The Commission, its remit "to identify and prioritize the most critical sources and causes of information disorder and deliver a set of short-term actions and longer-term goals to help government, the private sector, and civil society respond to this modern-day crisis of faith in key institutions," is among the most high profile efforts to take on what has become an insidious and multi-faceted scourge.

Information disorder is defined as "the sharing or developing of false information with or without the intent of harming," and it is not hyperbole to suggest that it has far-reaching consequences. Once a society's information landscape becomes so inundated with false information that its people lose the ability or desire to discern fact from fiction, the society becomes a prime target for manipulation.

Manipulation comes in the form of disinformation—false information spread with the intent to deceive. Disinformation finds fertile ground in a muddied information landscape where mistrust in institutions, structural inequality, and intellectual apathy persist. Campaigns conducted by state and non-state actors leverage these conditions to manipulate societal decision-making in the short term and/or erode social cohesion over the long term.

Successful campaigns can turn one group against another, a population against its government, or a child against a parent. That they can be conducted with little risk and high reward makes them all the more dangerous. We should not be surprised that it has come to this. For one, people are bombarded with more information than their brains are willing and able to process.
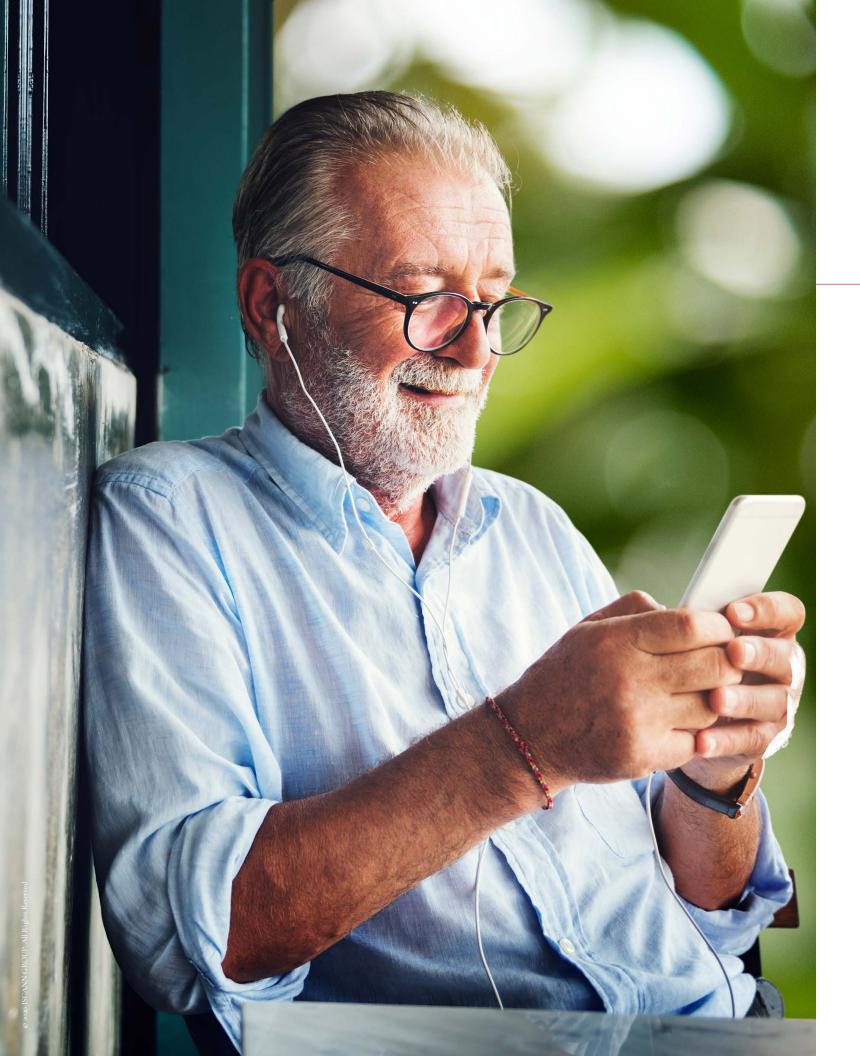
The average person in the United States in 2020, for example, spent 1300 hours scrolling social media sites, consuming an unprecedented amount of information in the process. Evaluating each piece of information on its intellectual or factual merit is just not possible anymore. At the same time, the sheer scale has brought about the belief that information should be free, or at the very least not worth paying for.

Secondly, the economics of information, denominated in "attention" incentivize creators to produce content that garners attention, not praise for its journalistic integrity. Praise, after all, does not keep the lights on and journalists employed. Traditional publications, amid declining print ad revenues after the proliferation of the internet, were faced with this exact dilemma: play ball with the evolving attention economy or risk the financial consequences.

What it all amounts to are increasingly polarized societies with no mutually trusted sources of information, no pursuit of shared truth, and the incentive to produce information that people want **to read regardless of its integrity.**

Manipulation comes in the form of disinformation

There is simply too much to be gained from using false information for one's own gain

How we got here

Disinformation has been around for as long as we have had rumors. There is simply too much to be gained from using false information for one's own gain. Political campaigns, revolutions, and belligerents have made liberal use of propaganda over the years. The Western Allies, prior to the DDay landings in Normandy, France, conducted a complex and widespread deception campaign (codenamed Operation Bodyguard) to convince the German high command that the landings would in fact be made at the Pas-de-Calais and occur later than planned.

Through a variety of deception methods, such as visual deception, double agents, and radio traffic, the Western Allies were able to delay the German army by 7 weeks—enough time establish a beachhead in Normandy.

The Soviet KGB was also known to conduct successful disinformation campaigns across the world. In their book titled "Disinformation", Lt. Gen. Ion Mihai Pacepa—the former head of foreign intelligence under Romanian dictator, Nicolae Ceausescu, and highest-ranking Eastern Bloc defector—and Prof. Ronald Rychlak assert that the KGB conducted a smear campaign against Pope Pius XII. Using imaginative techniques, including commissioning a British author to pen the aptly titled novel "Hitler's Pope", the KGB attempted to shift Western public opinion of the Pope.

What has changed over time is the ease at which disinformation can be spread. Prior to any sort of amplification technology, such as the printing press or radio, disinformation spread slowly, from person to person. This worked in short-term scenarios, such as deception campaigns during battles, but made larger-scale disinformation campaigns a lot more difficult and expensive.

With the advent of each successive amplification technology, the potential reach of disinformation increased while the cost decreased. Radio made it possible to reach a large mass of people with a single message; television increased the reach and made the message visual; the internet enabled global reach at minimal cost; social media democratized the attention economy and enabled micro-targeting; artificial intelligence is currently enabling scale, automation, and deepfakes—fabricated audio, video, and imagery that are very difficult to discern from the real thing.

As technology has evolved and the economics have changed, we have witnessed a fundamental shift in the media landscape. Local publications have suffered the most, declining more than 20% in the United States since 2004. This has, in turn, altered the sources to which people turn for their information. Social media has become a primary source of information, which gives the platforms, through their feed algorithms, disproportionate influence over what their users see.

On the other side of the equation, the geopolitical stakes have never been higher. We saw disinformation campaigns proliferate throughout the Cold War as the two sides looked to gain an advantage by any means necessary. That mentality has continued into the 21st century amid a perceived decline in US hegemony and the ensuing fight for influence. This has made disinformation a key component of any modern geopolitical strategy.

Operation Bodyguard and Confirmation Bias Bodyguard played on a psychological phenomenon known as confirmation bias, or the tendency to believe information that confirms one's existing beliefs.

The Western Allies exploited the German high command's anticipation that the landing would take place at the strategic Pas-de-Calais by disseminating information that confirmed this idea.

Most German spies operating in the UK had already been turned into double agents, a fact unknown to the Germany high command.

Messages of a Pas-de-Calais landing received from these spies confirmed what the high command had seen evidence of elsewhere (false buildups) and what it already believed to be the case.

A deception campaign launched after the Normandy invasion to convince the German high command that Normandy was a diversion proved highly successful at delaying the German army because it confirmed the original belief of a Pas-de- Calais landing.

Oxford Dictionary, in naming "post-truth" as the 2016 Word of the Year, described it as "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief". Although five years have passed, no single idea portends our future relationship with information quite like "post-truth."

Where we're headed

Like the famous political propagandists before them, state and non-state actors will continue to use disinformation to exploit societies in which the pursuit of truth has become a zero-sum game of I'm Right, You're Wrong. Where there is no room for the idea that two things can be true at the same time, disinformation will be there to provide the data points to support any perspective.

And as technology evolves, disinformation campaigns will only get more sophisticated in their attempt to sow division and erode faith in democratic institutions. The vast amount of data being collected from people every day on social media will make micro-targeting even more surgical. Deepfakes, already a grave threat to our ability to distinguish between fact and fiction, will

continue to improve, while AI-powered bot networks will get better at mimicking human interaction.

Our ultimate destination can perhaps be best characterized by Hannah Arendt, political philosopher and author, who in her 1951 book "The Origins of Totalitarianism" stated, "The ideal subject of totalitarian rule is not the convinced Nazi or the convinced communist, but people for whom the distinction between fact and fiction (ie the reality of experience) and the distinction between true and false (ie the standards of thought) no longer exist."

Soviet KGB Active Measures Soviet KGB "active measure disinformation campaigns" were widespread throughout the Cold War period.

Operation INFEKTION (1980s).

The goal was to give rise to the notion that the United States had invented HIV/AIDS as a result of biological weapons research.

Even today, research and other information disseminated under INFEKTION is still being cited, most notably by former South African president Thabo Mbeki.

Operation KARNO (1960s) sought to turn Indonesian public and government opinion against the United States and compromise the\ US ambassador and head of espionage. Anti-America materials were seeded in the media, triggering demonstrations in front of the US embassy. Eventually, American companies were nationalized, the head of espionage was expelled, and diplomatic ties were severed.

Disinformation
vs. Misinformation

Before looking more closely at the problems created by disinformation, we need to establish some working definitions to avoid any potential confusion. Misinformation and disinformation are sometimes used interchangeably, as is "fake news," in reference to false and misleading information. For the purposes of this paper, we define the two terms as follows:

Misinformation

False information spread, regardless of whether there is intent to mislead or deceive. Someone misquoting the time of an event is an example, as is a person publishing content they believe to be true. Misinformation, while indeed harmful, is often spread unknowingly or by mistake. This fact alone means that misinformation will always exist in some form or another.

Disinformation

False information spread with the intent to mislead or deceive. Intent is what makes disinformation different from and more dangerous than misinformation. Actors behind disinformation have end goals— whether influence, profit, or both—and

the means to reach them. Fake news is one example of disinformation. However, successful disinformation is often derived from a kernel of truth to make it seem more believable and, therefore, more insidious.

It is worth noting that the intent to deceive can take any form and does not only apply to human-to-human interaction. Machines, in particular the sensors that feed data to AI-based machines, can also be victims of disinformation. Case in point: Chinese researchers were reportedly able to confuse Tesla's self-driving software by providing the sensors with deliberately incorrect information.

Intent is what makes disinformation **different from and more dangerous** than misinformation

The Problem

When looking to mitigate the impact of disinformation and prepare societies for the modern information landscape, a number of challenges emerge in identifying the right problems to solve.

Top of the list is the "symptoms vs. root cause" conundrum. To illustrate, the Drug Enforcement Administration (DEA) has for half a century approached the narcotics problem in the United States by targeting the supply side of the equation, specifically the growers, manufacturers, and distributors of controlled substances. While this approach may seem logical on the surface, we would argue that it only addresses the symptoms of a much deeper problem: the conditions that drive the demand for narcotics.

Disinformation draws many parallels to narcotics. Following the DEA's approach, societies can look to stop the production of disinformation through proactive campaigns against bot networks, troll farms, and fake news websites. They can also try to control distribution through the regulation or censorship of social media and other content creation platforms. These initiatives, however, only address the symptoms. Instead, societies should look to answer the question of why disinformation is in such high demand in the first place.

Another challenge is the desire for headlines over actual impact. Using the DEA example again, the organization has been criticized for prioritizing operations that allow it to seize the most money and generate headlines.

In the disinformation context, shutting down a troll farm or a fake news site is good publicity, but the impact is questionable at best. When something meeting market demand gets shut down, an alternative will always emerge to fill the void.

With that in mind, we have identified four problems that focus on the demand side of the equation.

Inherent mistrust of information/sources that contradict one's perspective

This is perhaps the problem most indicative of a post-truth society. When the pursuit of shared truth becomes a zero-sum game, there is only room for one perspective to be right. Nuance and the idea that two things can be true at the same time become intellectual boondoggles. In this environment, we see an accumulation of information around the poles of a debate.

The "for" side, for example, will seek and find information to support its side, and vice versa. Whether the information presented is rooted in fact is beside the point. The result, by the very definition of "zero sum," is an environment in which one side cannot trust the information presented by the opposing side. Such information is written off as fake news, patently false, or rooted in conspiracy. Any attempt to fact-check or present evidence to the contrary only serves to further entrench the opinion of the side whose information is being questioned. This produces a dangerous endgame: that two or more alternate realities, each supported by its own shared truth, become so impenetrable that all points of relation are lost. We see this manifest itself in the move towards adversarial political analysis on radio, television, and streaming that prioritizes sparring and "hot takes" over respectful intellectual debate.

An argument can be made that the problem is with the information itself; that because the information made available to people is of questionable integrity, it means that the possibility of intellectual debate is impossible. If people only have access to information rooted in fact, the argument goes, the zero-sum game will magically become the pursuit of shared truth. While this may be true, it trivializes the complexity and feasibility of the solution required to ensure the integrity of information.

Declining empathy for contradictory perspectives and ideas

Related to the problem of the mistrust of information presented by opposing sides is the lack of empathy for perspectives and ideas that contradict one's own. This is the emotional aspect of the zero-sum game. Not only do the sides reject each other's information, they refuse to take the time to understand where the other side is coming from, or why it believes what it believes.

The importance of empathy should not be overlooked. One side can vehemently disagree with another while still seeking to understand the reasoning behind the opposing side's position. This is the first step on the road to productive discourse. Without empathy, a debate devolves into ad hominem attacks, emotionally charged arguments, and eventually a desire to avoid discussing a particular topic. At a societal level, this is how polarization becomes entrenched.

A lack of empathy also provokes the desire to try to change the beliefs of the other side. Due to psychological and social reasons, people find it difficult to change their minds. For example, if a person's affiliation in a group would be impacted by changing their mind, it is unlikely the person will do so. Faced with that prospect, a completely new approach is needed to build bridges.

Spreading false information has become an accessible, effective, and profitable enterprise in the attention economy

attention economy. Creators can easily create an attention-grabbing headline, write engaging content, and share/boost the article widely on social media. As the content generates more clicks, two things happen. The first is an increase in the creator's share of ad revenue generated by ads embedded in the article. The second is that the social media algorithms further amplify the content's reach based on its popularity—how often people engage with the content. And when the content is boosted or sponsored, it generates more revenue for social media platforms.

For people getting their information from social media, the prioritization of popular and/or revenue-generating content drastically skews what they see. This often means people see content that confirms what they already believe because they are more likely to click on such content as opposed to content proposing an alternative perspective. In this way, social media platforms are monetizing confirmation bias. Without a realignment of these incentives, social media continues to be a questionable source for information.

Widening disinformation awareness gap

Everyone is a victim of disinformation, whether they are aware of it or not. Disinformation forms the basis of people's arguments, muddies the information landscape, makes people question their

own beliefs, destroys relationships, and erodes social cohesion. It also impacts the outcome of elections and referendums. Even those who consider themselves immune to it are still at the mercy of it. This fact alone speaks to just how easy it is for trained disinformation operators to wreak havoc on a society.

But disinformation is more than just fake news sites generating clickbait headlines or troll farms pumping out antagonistic replies to tweets. Part of the awareness problem stems from people not having an adequate appreciation of what disinformation campaigns look like and what such campaigns are ultimately trying to achieve, especially over the long term.

To this end, disinformation is less about the actual information being spread and much more about how society becomes the perpetrator of its own demise.

The US Department of Homeland Security (DHS) sought to demonstrate this concept through its educational War on Pineapple initiative. Specifically, it wanted to show how targeted disinformation and social-media campaigns create controversy and, ultimately, provoke protest over "hot button" issues in American society. The lesson is clear: people need to better understand and appreciate their own role in disinformation campaigns.

The Anatomy of a Disinformation Operation

As part of its War on Pineapple initiative, the Department of Homeland Security outlined how foreign state and nonstate actors conducted disinformation campaigns to exploit divisions in the United States.

1. Target divisive issues with the intent to inflame the issue.

2. Prepare the necessary social media accounts used to disseminate information.

3. Amplify and distort the debate through trolling, ad hominem attacks, and disinformation.

4. Drive the debate into the mainstream by pushing the most extreme opinions on both sides of an argument.

5. Organize and encourage real-world action from both sides, such as protests and strikes to further entrench the divisions.

Misaligned incentives in the attention economy that make disinformation profitable

The attention economy is not a new phenomenon. Content creators and platforms—be they radio, books, newspapers, or television—needed to pique people's attention to earn advertising revenue. With the advent of the internet

and social media, that paradigm has not changed. What has changed are the democratization of content creation and attention monetization, the degree to which algorithms control what people see, and the shift from impression-based advertising costs to clickbased.

What this has meant is that spreading false information has become an accessible, effective, and profitable enterprise in the

Existing Solutions

False information is a complicated problem that can be approached from many different angles. Perhaps the most serious effort at compiling actionable recommendations comes from the Aspen Institute's Commission on Information Disorder. In its aforementioned report, it looked at three areas it deemed necessary for turning the tide on information disorder: increasing transparency, building trust, and reducing harm. Every stakeholder in the information ecosystem—governments, social media companies, media companies, individuals, and employers—has a role to play.

There is no shortage of potential solutions out there. Some look to pass judgement on the information in question, others focus on mitigation strategies. Stemming the flow, moderation, and regulation have also been tried, to varying degrees of success. It is important to note that no one solution is going to solve the problem.

Fact-checking

Fact-checking plays a key role in the solution to the problem of false information. Whether for profit or not, fact checkers can assess any piece of content and come to a conclusion as to the degree of its veracity. Popular organizations and services include: Factcheck.org, PolitiFact, Snopes, and Captain Fact. Fact-checking's inherent weakness is bias. For fact-checkers, even the most neutral among them are still subject to personal bias, unconsciously ascribing greater factual weight to sources which align with their own views or only choosing to fact check statements they disagree with. This fact alone means that people are unlikely to trust fact-checkers who regularly dispute the veracity of content that

confirms their own beliefs. One proposed solution to the problem of bias is the use of adversarial fact-checking—using teams of people with "diverse sociopolitical views" instead of the partisan approach currently employed.

Another challenge for fact-checking is scale. The manual approach—using humans—cannot keep up with the quantity of information spread every day. Artificial intelligence-based fact-checking could, in theory, meet the scaling needs but remains a work in progress. It is worth noting that AI-based solutions are also subject to bias because humans ultimately train the algorithms.

Gamification

Gamification is a way to inject fun into dull topics. As important as the impact of disinformation is, it is not exactly an exciting topic. Do students really want to read textbooks or listen to lectures about disinformation? Or would they rather experience it using a more practical and engaging approach like gamification? Given the success of gamification in other areas such as financial literacy, it stands to reason that games represent a key cog in helping people understand the nature of the disinformation threat.

We have already seen some attempts to gamify media literacy and the fight against fake news. The game Bad News, for example, looks at how disinformation is produced and disseminated by allowing people to play the role of a fake-news media baron. The goal of the game is to amass followers and credibility using fake news tactics.

There is also the possibility of combining gamification with monetization by tapping into the blockchain and cryptocurrency ecosystem. For example, blockchain can be used as a decentralized and immutable repository of shared truth, while cryptocurrency can be used to incentivize actions which have a positive impact.

Education

The most logical place to provide people with the tools to recognize and respond to the threat of disinformation is at educational institutions. The sooner people understand how to cope with today's information landscape the better. A teacher at a school in Pennsylvania has taken a novel approach to the topic. Instead of passing judgment on the veracity of information, she helps students learn to evaluate the sources of information before reaching a conclusion. This creates the critical-thinking habits needed to effectively evaluate information.

Others believe that the way "digital literacy" is currently being taught is actually making things worse. A Stanford History Education group study found that college students, using commonly touted digital literacy techniques, had a very difficult time understanding the source behind information and even whether the information was legitimate or not.

Regulation

Some countries have instituted laws and regulations to limit the spread of fake news. Indonesia, for example, has made the spreading of fake information and news a criminal act. While punitive, such

laws are unlikely to be enforced beyond high-profile cases. On the contrary, some assert that these laws are put in place for political purposes, specifically to stifle dissent against the government.

Governments are also exploring the regulation of social media companies to better hold the latter accountable for the spread of disinformation on their platforms. In the United States, Section 230 of the Communications Decency Act—the law which protects internet companies from liability for user-generated content spread on their platforms—is currently under review, changes to which would force social media companies to act.

Content moderation

Content moderation is one solution commonly foisted upon social media companies and other content creation platforms. Some have tried it, either through the use of independent fact checking agencies or in-house moderation teams.

There are three primary challenges with content moderation. The first is the fine

line between moderation and censorship. This is especially relevant in a post-truth society, where one side's moderation is the other side's censorship. Societies that prioritize free speech risk alienating one of the key pillars of democracy by requiring the moderation of content.

Second is the question of who the gatekeepers are. Who gets to decide what content gets moderated? Governments? The platforms themselves? Independent organizations? Given that social media companies often earn the most from content of questionable integrity, it stands to reason that they should not be the appointed gatekeepers. Governments, with their tendency to politicize, are also not good candidates. Independent organizations are likely the best option, but even they suffer from bias.

Third is how to handle the sheer scale of information. Even if independent organizations could moderate, they simply cannot respond to the quantity of information disseminated every day. AI-based solutions are an obvious candidate, but can technology really be the answer?

Technology's role in a potential solution

Technology is often blamed for the state of the current information landscape. While this is fair in that the creation and dissemination of information has never been easier, cheaper, and more targeted thanks to technology, we should not apportion blame on the internet, social media, and artificial intelligence alone.

The best way to characterize technology's impact may be in understanding the gap between a person's ability to responsibly consume information and the quantity of information the person consumes. With each technological innovation, quantity has increased disproportionately to our ability to consume information responsibly. People no longer have the time or energy to evaluate every piece of information they see. To analogize, when a hospital becomes overwhelmed with patients, it has no choice but to triage.

At the same time, technology is considered by some to be the savior. After all, who better to confront the scale enabled by technology than technology itself? Meta CEO Mark Zuckerberg is one such

proponent, stating in 2018 that "... over the long term, building AI tools is going to be the scalable way to identify and root out most of this harmful content." Whether he is right, at least in terms of content moderation, depends almost entirely on whether AI algorithms can accurately evaluate information while remaining free from the same bias that affects human moderators.

Beyond dissemination, our increasing reliance on AI-based solutions only increases the number of potential attack vectors. If sensors cannot distinguish between real and fake information, we will find it difficult to ever fully trust things like self-driving vehicles.

At best, we believe technology will have a net neutral impact on disinformation. It will be a core part of any solution, such as decentralized fact-checking, deepfake recognition, and disinformation education, but will also enable increasingly sophisticated deepfakes, better amplification, and even greater micro-targeting. At worst, though, technology will eradicate whatever line remains between fact and fiction. The ever-increasing prevalence of deepfakes generated by AI

algorithms have the potential to erode our trust in the very idea of fact itself.

Why a different approach is needed

While we believe that each of the above solutions provides value, they are very much focused on the information being disseminated, not on how and why disinformation is dividing our societies.

We can throw technology and facts and moderation and regulation at the problem, but they will not change the fact that the reasons people believe what they do have less to do with false information and more to do with the circumstances in which they live and the groups they affiliate with. People who have reasons to distrust government institutions or suffer from income inequality, for example, approach information differently than those who are on the other side of the equation. If societies continue to focus on the veracity and flow of information, they are missing the point.

People believe what they do have less to do with false information and more to do with **the circumstances** in which they live and the groups they affiliate with.

Our Recommendations

We need a multi-faceted solution to mitigate the impact of disinformation on societies. Such a solution needs to go straight to the heart of the matter, not only address the symptoms. This idea is rooted in three basic assumptions:

1) It is not realistic to try to stem the flow of disinformation. Shutting down troll farms and bot networks will only result in new troll farms and bot networks springing up to fill the void.

2) People are the ultimate targets of disinformation campaigns. Without manipulating people, elections cannot be influenced, company boycotts cannot succeed, and divisive issues cannot be inflamed.

3) We need to first evaluate the intent, if any, behind information before fixating on whether something is fact or fiction. People need to be aware of what disinformation is trying to achieve in order to avoid becoming unwitting accomplices in campaigns designed to divide their own societies.

More specifically, these are some of the tactics we think would be helpful in combatting the impact of disinformation:

Raise disinformation awareness

The first step is helping people understand disinformation in holistic and tangible ways. Only then can they begin to inspect their own information consumption habits and recognize disinformation campaigns for what they are. To make this palatable for everyone, the conversation needs to move away from the integrity of the information itself and focus on raising awareness around the intent behind the information. We also suggest a multi-

disciplinary approach, leveraging experts from disciplines such as psychology, technology, media, cybersecurity, journalism, and intelligence to provide actionable insights.

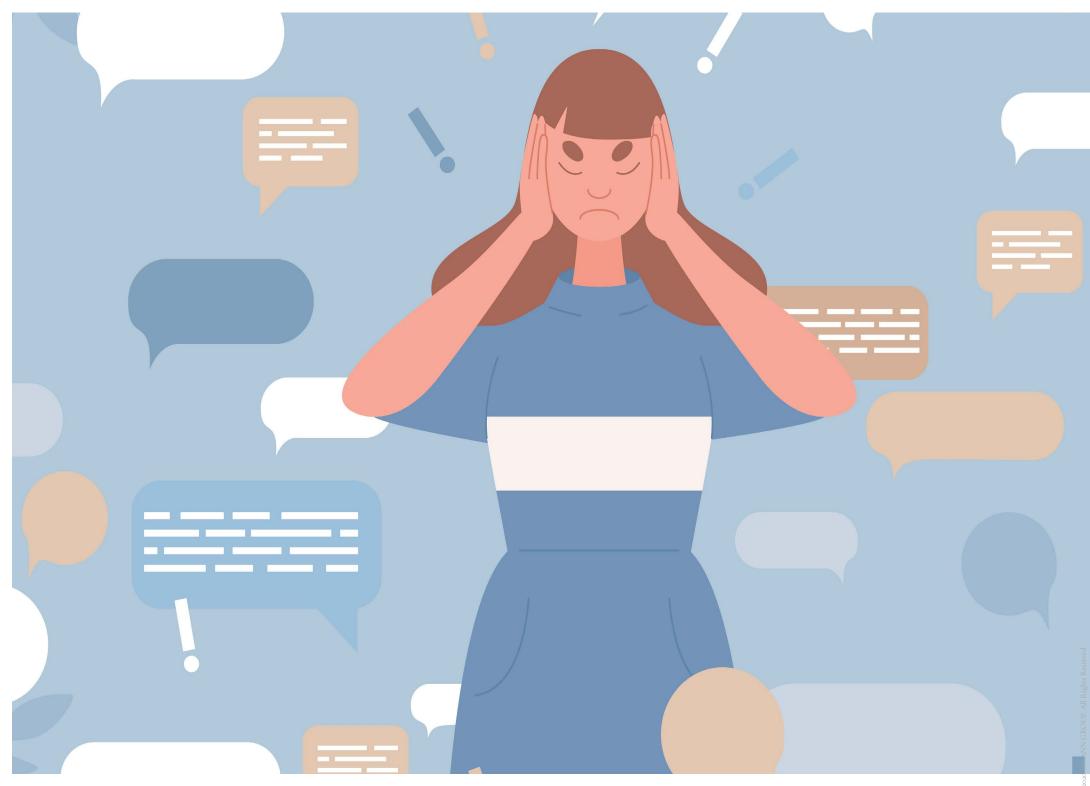## Promote empathy as a tool to bridge societal divides

When two sides do not trust each other's facts, the solution is not to double down on facts. We need to move away from the endless cycle of "do your research" and towards discourse rooted in empathy. If we seek to better understand where the other side is coming from, we establish credibility and can find points on which we agree. This is the basis for constructive discourse and the pursuit of a shared truth.

Develop educational initiatives

Disinformation needs to be addressed by education systems at all levels. Societies need to prepare themselves for the information landscape they find themselves in. Critical thinking is important, as is understanding the anatomy and intent of disinformation campaigns.

Call for the realignment of attention economy incentives

That the modern attention economy incentivizes the spread of disinformation hampers many of the efforts to address the problem. Flipping these incentives so that information integrity is incentivized instead would have a dramatic impact on the information landscape. This would by no means eliminate disinformation, but it would make the enterprise a lot less profitable. It is unlikely, of course, that social media companies will take the initiative on this, so government regulation is needed.

Conclusion

History has warned us repeatedly that we should not underestimate disinformation's impact on societies and governments. In this era of information proliferation, disinformation campaigns have never been cheaper, easier, and more targeted. Thanks to AI-based solutions such as deepfakes and bots, skilled operators can divide, undermine, and discredit without incurring much in the way of risk. They can even profit from such activities.

The impact of disinformation can be seen most clearly in post-truth societies. Opposing sides no longer trust each other's facts and sources, empathy for alternative perspectives is in decline, the disinformation awareness gap is widening, and the attention economy rewards content that gets the most clicks, not content that prioritizes journalistic integrity.

The need for societies and governments to find tangible solutions to mitigate the impact of disinformation is pressing. The challenge is figuring out how to approach a problem so complex and multi-faceted. Attempting to shut down the producers or stemming the flow of disinformation seems a fool's errand aimed at securing headlines instead of impact. Expecting social media companies to self-regulate is also a lot to ask given the obligation to generate profit for shareholders.

At the same time, we should also re-examine the success of existing solutions, especially those that focus on the veracity of information. In post-truth societies, societal divides need to be bridged before we can benefit from things like independent fact checking, gamification, and content moderation. What we should look to do instead is understand why disinformation finds such fertile ground in societies.

We know by now that there is no panacea solution that will stop disinformation. We should instead look to mitigate the impact of disinformation by focusing on the ultimate targets of the disinformation campaigns: people. We need to raise awareness of how disinformation campaigns work, promote empathy between opposing sides, develop educational initiatives to prepare future generations, and call for the realignment of attention economy incentives to make information integrity profitable. Through these initiatives, we think societies will be better prepared to withstand the onslaught of information.

References

"Misinformation" Vs. "Disinformation": Get Informed On The Difference. (N.d.). Retrieved From Dictionary.com: Https://Www.dictionary.com/E Misinformation-Vs-Disinformation-Getinformed- On-The-Difference/

About. (N.d.). Retrieved From Drug Enforcement Administration: Https://Www.dea.gov/Who-Weare/About

Blumenson, E. D., & Nilsen, E. S. (N.d.). Policing For Profit: The Drug War's Hidden Economic Agenda. Retrieved From Ssrn: Https://Papers.ssrn.com/Sol3/Papers.cfm?Abstract_id=959869

Ceci, S. J., & Williams, W. M. (N.d.). The Psychology Of Fact-Checking. Retrieved From Scientific American: Https://Www.scientificamerican.com/Article/The-Psychology-Of-Fact-Checking1/

Fjp Law Offices. (N.d.). The Criminal Act Of Publishing Or Spreading Fake News (Hoax). Retrieved From Https://Fjp-Law.com/The-Criminal-Act-Of-Publishing-Or-Spreading-Fake-News-Hoax/

Ghosh, D. (N.d.). Are We Entering A New Era Of Social Media Regulation? Retrieved From Harvard Business Review: Https://Hbr.org/2021/01/Are-We-Entering-A-New-Era-Of-Social-Mediaregulation

Harwell, D. (N.d.). Ai Will Solve Facebook's Most Vexing Problems, Mark Zuckerberg Says. Just Don't Ask When Or How. Retrieved From The Washington Post: Https://Www.washingtonpost.com/News/The-Switch/Wp/2018/04/11/Ai-Will-Solve-Facebooksmost- Vexing-Problems-Mark-Zuckerberg-Says-Just-Dont-Ask-When-Or-How/

Kandel, N. (N.d.). Information Disorder Syndrome And Its Management. Retrieved From Us National Library Of Medicine National Institutes Of Health: Https://Www.ncbi.nlm.nih.gov/Pmc/Articles/Pmc7580464/

Operation Infektion. (N.d.). Retrieved From The New York Times: Https://Www.nytimes.com/2018/11/12/Opinion/Russia-Meddling-Disinformation-Fake-Newselections. Html

Oxfordlanguages. (N.d.). Word Of The Year 2016. Retrieved From Oxfordlanguages: Https://Languages.oup.com/Word-Of-The-Year/2016/

Schwartz, S. (N.d.). Disinformation Is Rampant. Here's How Teachers Are Combatting It. Retrieved From Educationweek: Https://Www.edweek.org/Teaching-Learning/Disinformation-Isrampant- Heres-How-Teachers-Are-Combatting-It/2020/11

Slávik, M. (N.d.). Communist Intelligence Service Successes - An Overview Of Active And Influence Operations From The Military Hall Of Fame. Retrieved From Minulost.cz: Https://Www.minulost.cz/?Q=En/Communist-Intelligence-Service-Military-Hall

Suciu, P. (N.d.). Americans Spent On Average More Than 1,300 Hours On Social Media Last Year. Retrieved From Forbes: Https://Www.forbes.com/Sites/Petersuciu/2021/06/24/Americansspent- More-Than-1300-Hours-On-Social-Media/

Svoboda, E. (N.d.). Why Is It So Hard To Change People's Minds? Retrieved From Greater Good Magazine: Https://Greatergood.berkeley.edu/Article/Item/Why_is_it_so_hard_to_change_peoples_minds

Takenaga, L. (N.d.). More Than 1 In 5 U.s. Papers Has Closed. This Is The Result. Retrieved From The New York Times: Https://Www.nytimes. Com/2019/12/21/Reader-Center/Local-News-Deserts.html

References

Tapsel, R. (N.d.). *Indonesia's Policing Of Hoax News Increasingly Politicised. Retrieved From Iseas - Yusof Ishak Institute: Https://Www.iseas.edu.sg/ Images/Pdf/Iseas_perspective_2019_75.Pdf*

Tencent Keen Security Lab. (N.d.). *Tencent Keen Security Lab: Experimental Security Research Of Tesla Autopilot. Retrieved From Keen Security Lab Blog: Https://Keenlab.tencent.com/En/2019/03/29/Tencent-Keen-Security-Lab-Experimental- Security-Research-Of-Tesla-Autopilot/*

The Aspen Institute. (N.d.). *Commission On Information Disorder. Retrieved From Https://Www.aspeninstitute.org/Programs/Commission-On-Information-Disorder/*

The Aspen Institute. (N.D.). *Commission On Information Disorder Final Report. Retrieved From Https://Www.aspeninstitute.org/Publications/ Commission-On-Information-Disorder-Finalreport/*

The War On Pineapple: Understanding Foreign Interference In 5 Steps. (N.d.). *Retrieved From Cisa: Https://Www.dhs.gov/Sites/Default/Files Publications/19_0717_cisa_the-War-On-Pineappleunderstanding- Foreign-Interference-In-5-Steps.pdf*

Tools That Fight Disinformation Online. (N.d.). *Retrieved From Rand Corporation: Https://Www.rand.org/Research/Projects/Truth-Decay/Fighting-Disinformation/Search.html*

Valentini, A. (N.d.). *Gamification And Other Strategies To Develop Financial Literacy In Adult Learners. Retrieved From European Commission: Https://Epale.ec.europa.eu/En/Blog/Gamification-Andother- Strategies-Develop-Financial-Literacy-Adult-Learners*

Walker, M., & Matsa, K. E. (N.d.). *News Consumption Across Social Media In 2021. Retrieved From Pew Research Center: Https://Www.pewresearch. org/Journalism/2021/09/20/News-Consumptionacross- Social-Media-In-2021/*

Wineburg, S., Breakstone, J., Ziv, N., & Smith, M. (N.d.). *Educating For Misunderstanding: How Approaches To Teaching Digital Literacy Make Students Susceptible To Scammers, Rogues, Bad Actors, And Hate Mongers. Retrieved From Stanford History Education Group: Https://Purl.stanford. edu/Mf412bt5333*

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