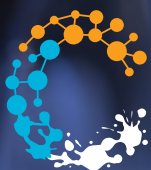


# News Literacy and Misinformation/ Disinformation in the Era of COVID-19



CollaborateUp



Wilson  
Center



### About CollaborateUp

CollaborateUp is an innovative, international consulting, training, and research firm working to accelerate cooperation among governments, companies, and nonprofits as they tackle some of our world's toughest challenges.

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The study was supported by Philip Morris International (PMI). CollaborateUp retained full independence in the research, writing, and editorial and peer review phases of the study. Therefore, the views expressed are those of the authors and may not represent the views of PMI.

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# Advisory Board

We gratefully acknowledge our independent Advisory Board members for contributing their expertise and time in the peer review of this report:



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# Foreword

Social media is as addictive as gambling or drugs.<sup>1</sup>

Reading a newspaper — even a digital one — is a completely different experience than interacting with the feed of a social media platform. The first is fixed and static (even with comments and embedded videos), providing a clear beginning and end.

The second creates a forum — a living conversation — that entices the user’s regular interaction by playing to his or her fear of missing out. It instantiates a complex neuropsychological feedback loop embedded in an expertly architected user interface. This social media architecture creates a rich medium in which “a well-constructed lie can spread much faster than a complicated truth,” as CollaborateUp’s new report finds.

*News Literacy and Misinformation/Disinformation in the Era of COVID-19* identifies five major trends fueling the problem. One of the most profound is that social media and communications platforms take advantage of humans themselves. Put simply: the brain evolved in an analog world thousands of years ago relying on instincts. We haven’t had enough time to adapt to the massive changes in information input — often designed to appeal to our most basic wiring — to identify when we are exposed to false information (deliberate or otherwise).

And why do people share lies, even if they are able to discern fact from fiction? Some suggest<sup>2</sup> that sharing

misinformation, in particular, actually increases when messages target some kind of moral outrage. It is a problem of the means justifying the ends: even if a user interacts with a post that they know is not factually correct, the user may still “like” or share it to their own network because the cause is deemed more important to support than one small inaccurate truth.

Governments — many with complicated histories of their own use of mis- and disinformation — have struggled to provide guardrails to prevent harm caused by abuse of social media platforms. Plus, as CollaborateUp identifies, “As more people see how issues they previously thought fixed, like public policy and science can evolve, it shakes their confidence.”

Reducing the impact of this massive people problem will be hard and take many years, requiring fundamentally changing cultural features of the information landscape. Thankfully, CollaborateUp provides a path forward, including recommendations for using “education and tech-enabled nudges to encourage more unconscious and autonomic responses to misinformation.”

These “nudges” add an extra step in the process of sharing to disrupt the instinctive behavior of sharing. Combined with careful education efforts, “strategically introduced friction”<sup>3</sup> might be the interruption needed to punctuate the dopamine-seeking reward loop and our addiction to share mis- and disinformation.



**Meg King** is the Director of the Science and Technology Innovation Program (STIP) at the Wilson Center. She leads a portfolio of transformational technology projects which focus on leveraging North America’s competitive advantages while improving security as well as analyzing policy challenges and opportunities posed by space-enabled critical infrastructure. King also leads cutting-edge training programs to equip generations of Congressional and Executive branch staff with a better base of technology knowledge. A former Pentagon program manager and senior Congressional aide, King has written on topics ranging from cybersecurity to AI.

<sup>1</sup> Busby, M. (2018, May 8). Social media copies gambling methods “to create psychological cravings.” The Guardian.  
<sup>2</sup> Brady, W., McLoughlin, K., Doan, T., & Crockett, M. (2021, August 13). How social learning amplifies moral outrage expression in online social networks. ScienceAdvances.  
<sup>3</sup> Rauch, J. (2019, July 10). Twitter Needs a Pause Button. The Atlantic. <https://www.theatlantic.com/magazine/archive/2019/08/twitter-pause-button/592762/>





# Executive Summary

## The Issue

As the world grapples with a raging pandemic, information literacy — the capacity to critically evaluate content for its quality and usefulness — is crucial to survival and recovery. Disinformation and misinformation erode trust in public institutions, exacerbate class conflict, foment fear and hatred, weaken the credibility of our institutions, embolden hostile actors, and jeopardize all human society and especially democracies.

The spread of mis- and disinformation are not new phenomena, but the technologies and platforms that now connect billions of people around the world enable the creation and rapid dissemination of more sophisticated and dangerous forms of distortion than ever before. The growing scope and scale of the threat posed by disinformation and misinformation are seen in politics, health, the environment, and technology, among other areas of society.

This report sheds light on the global trends that come from these new and evolving forms of misinformation and disinformation, issues that increasingly affect all stakeholders, including individuals, civil society, business, and government. While some may downplay or dismiss the severity of this threat, these are not victimless crimes — misinformation and disinformation can cause suffering, economic loss, and even death. Combatting these issues and restoring trust in reliable sources of information and data requires urgent action at the highest levels, something not currently happening in a coordinated manner. Moreover, all these stakeholders must unite to eradicate this scourge. No individual group can overcome this challenge alone. This report provides recommendations for a global, multi-stakeholder approach to addressing these issues.

## Our Research Approach

As a leader in accelerating collaboration and learning among diverse stakeholders, CollaborateUp convened a series of private, virtual consultative roundtables in multiple countries and regions around the world. These forums sought to better understand how governments, companies, and civil society in these geographies address issues of mis- and disinformation in new and profound ways, especially with the proliferation of new technologies.

We conducted roundtables on the impact of mis- and disinformation in the European Union (EU) and United Kingdom, Japan, Latin America, Southeast Asia, sub-

Saharan Africa, and the United States, with a future roundtable planned for the Middle East.<sup>4</sup> We asked participants to consider questions around the current state of mis- and disinformation in their respective geographies, as well as the associated risks. We also asked what it means to be “information literate” in the modern world. Each convening consisted of 15-25 participants with the purpose of identifying options for multi-stakeholder approaches to best counter this growing problem.

<sup>4</sup> The consultative roundtables covered a mix of developed and emerging economies and a mix of languages and cultures facing challenges of mis- and disinformation. The geographic areas do not include Russia and China due to inaccessibility. In addition, given the diversity of markets we have explored through the consultative process we did not include New Zealand and Australia, in part because we believe we address their concerns through activities present in ASEAN countries (a represented geography) and other English-speaking countries.



This report provides a global perspective, drawing on the extant literature and expert insights and examples from our forums and research, as well as the considerable expertise of our independent advisory board. The report identifies five trends around the world, noted in Table 1, and five recommendations in Table 2.

Table 1:

The Five Trends

	Trend	Summary
1	<b>Rapidly evolving technologies drive rapidly evolving definitions of misinformation and disinformation, which in turn has led to declining trust in experts and institutions</b>	Greater unfettered access to information, enabled by new technologies, requires information users to distinguish between misinformation, an untruth, vs. disinformation, an untruth <i>deliberately spread</i> . Moreover, greater transparency into previously closed processes like science and policymaking requires users to also distinguish between “hard facts” that do not change and evolving information where our understanding or interpretation of the facts may change with new evidence. As more people see how issues they previously thought fixed (such as public policy and science) can evolve, their confidence is shaken, and this only grows as malign actors increasingly deploy sophisticated manipulation techniques.
2	<b>The acceleration of digital technologies has made information more accessible and shareable, increasing the speed at which lies spread</b>	More people know more than ever before, unlocking huge potential for improving lives. At the same time, the broad proliferation of digital technologies also means that a well-constructed lie can spread much faster than a complicated truth. Moreover, while propaganda has long been a tool of statecraft, digital media has made it incredibly cheap and effective for nation-states and other malign actors to have an outsized impact through disinformation.
3	<b>The digital world erases standards we are used to in the physical world</b>	Yelling “fire” in a crowded theater used to define the limit of free speech as the claim could be physically verified and attributed. In the digital world, without individually, physically verifiable facts, does this standard work?
4	<b>Tech-enabled scale and speed make regulating the flow of information increasingly challenging</b>	Laws, regulations, and corporate policies have not kept pace with technology nor with the scale and sophistication of how these technologies are used both for good and malign purposes.
5	<b>There is a continuing inability to address human psychology in the tech platforms and regulatory frameworks</b>	Our brains are built for an analog world with instincts, autonomic responses, and cognitive coping mechanisms ill-suited for a digital world. Social platforms intentionally take advantage of these features but neither the platforms nor laws have adjusted to reduce the harm they can cause.

Table 2:

The Five Recommendations

	Recommendation	Summary
1	<b>Build up autonomic response to disinformation and misinformation through awareness and nudging</b>	Use education and tech-enabled nudges to encourage more unconscious and autonomic responses to misinformation.
2	<b>Provide allies and "good guys" with new and updated guidelines, resources, tools, and legal/policy frameworks to reduce the spread of misinformation and disinformation</b>	Develop guidelines, resources, and other support to evaluate and manage risk and ultimately reduce the spread of dis-/misinformation. Make smart tools accessible to anyone for use at scale to counter the massive amount of computational propaganda.
3	<b>Update the limits of the distribution of free speech</b>	Currently, tech platforms do not have legal responsibility for what gets shared on them. This has exacerbated an underlying trend to conflate facts and opinions. While both the platforms and democratic governments have shown justified caution in censoring or taking responsibility for curating content, governments should consider regulating the underlying technology, e.g., the algorithms that distribute and amplify content. <sup>5</sup> Any updates to terms of service that impact the distribution of information must also ensure free flow of information and ideas, recognizing that people have a right to their opinions, but bots do not.
4	<b>Invest in longitudinal studies on policy effectiveness</b>	Rigorously evaluate different policy approaches to contribute to effective implementation and policy harmony over time.
5	<b>Focus on the fact production and distribution ecosystem</b>	Create accountability and a level playing field with reinforcing social norms to encourage sharing verified information and discourage sharing unverified information on both “open” and “closed” platforms. Train fact-checkers on the best way to correct false claims while avoiding unintended consequences that may actually reinforce the “stickiness” or believability of false information.

5 Harford, Tim. “What Magic Teaches Us about Misinformation.” *Subscribe to Read | Financial Times*, Financial Times, 6 May 2021, [www.ft.com/content/5cea69f0-7d44-424e-a121-78a21564ca35](https://www.ft.com/content/5cea69f0-7d44-424e-a121-78a21564ca35).



# Disinformation in numbers

Trust in traditional media outlets declined between 2020 and 2021 by



Source 2021 Edelman Trust Barometer

65%

of vaccine disinformation was spread by 12 individuals



Source MIT

False stories are

70% more likely to be retweeted than true stories



Source 2021 Edelman Trust Barometer

True stories take six times longer than false stories to reach

1,500 people



Source MIT

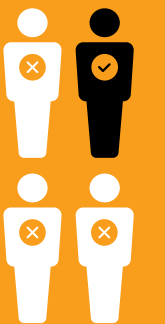


The 20 anti-vaxxers with the largest followings account for over two-thirds of the total cross-platform following of

59.2 million

Source Center for Countering Digital Hate (CCDH)

Only one in four social media users have good information hygiene, habits such as verifying information and avoiding information echo chambers.



Source 2021 Edelman Trust Barometer



Scientists were the most trusted leaders in the community, ranking higher than government leaders, religious leaders, journalists, business leaders, and people in the community.

→ Scientists



→ Government Leaders



→ Religious Leaders



Source 2021 Edelman Trust Barometer

→ Journalists



→ CEOs



→ People in the Community







# Global Trends

## Trend #1: Rapidly evolving technologies drive rapidly evolving definitions of misinformation and disinformation, which in turn has led to declining trust in experts and institutions

Greater unfettered access to information, enabled by new technologies, requires users to distinguish between misinformation, an untruth, and disinformation, an untruth *deliberately spread*. Moreover, greater transparency into previously closed processes, like science and government policymaking, require users to also distinguish between “hard facts” that do not change, such as the role of handwashing in reducing the spread of germs, and evolving information wherein our understanding or interpretation of the facts may change with new evidence. At the same time, the inverse to evolving information is true: people increasingly call hard facts “fake news” and how they perceive truth increasingly depends on the purveyor.

Though it may seem like the phenomena of misinformation and disinformation have emerged only recently, media conglomerates, governments, private companies, and other actors have long employed them. While both harm society, we must differentiate between the two terms. The primary difference between misinformation and disinformation comes down to intent: misinformation is “false information that is spread, regardless of whether there is intent to mislead” while disinformation is “deliberately misleading or biased information; manipulated narrative or facts; propaganda.”<sup>6</sup> As this report describes, however, discerning the intended use and spread of information is also challenging.

Technology does not cause fake news, disinformation, and misinformation, but rather communication platforms are byproducts of human behavior and free thinking, with governments utilizing propaganda campaigns dating back to as early as the 17th century. However, attitudes towards particular media institutions and news-bearers have certainly shifted over time. According to the 2021 Edelman Trust Barometer, trust in information sources in 2021 hit a record low.<sup>7</sup> Trust in traditional media outlets declined between 2020 and 2021 by 8 percent.<sup>8</sup>

As soon as people lose faith in one “gatekeeper of truth” they seek information from alternative sources. For example, in the 15th and 16th centuries priests and the clergy were thought of as *the* arbiters of truth, while in the 20th century, major television news anchors and newspaper editors were considered *the* reliable source of unbiased information.<sup>9</sup> Technology, from the printing press to the internet, is a vector for free thought and expression, and misinformation and disinformation have always accompanied them, either intentionally or unintentionally, as byproducts. For a quick history of mis-/disinformation, see **A Closer Look 1**.

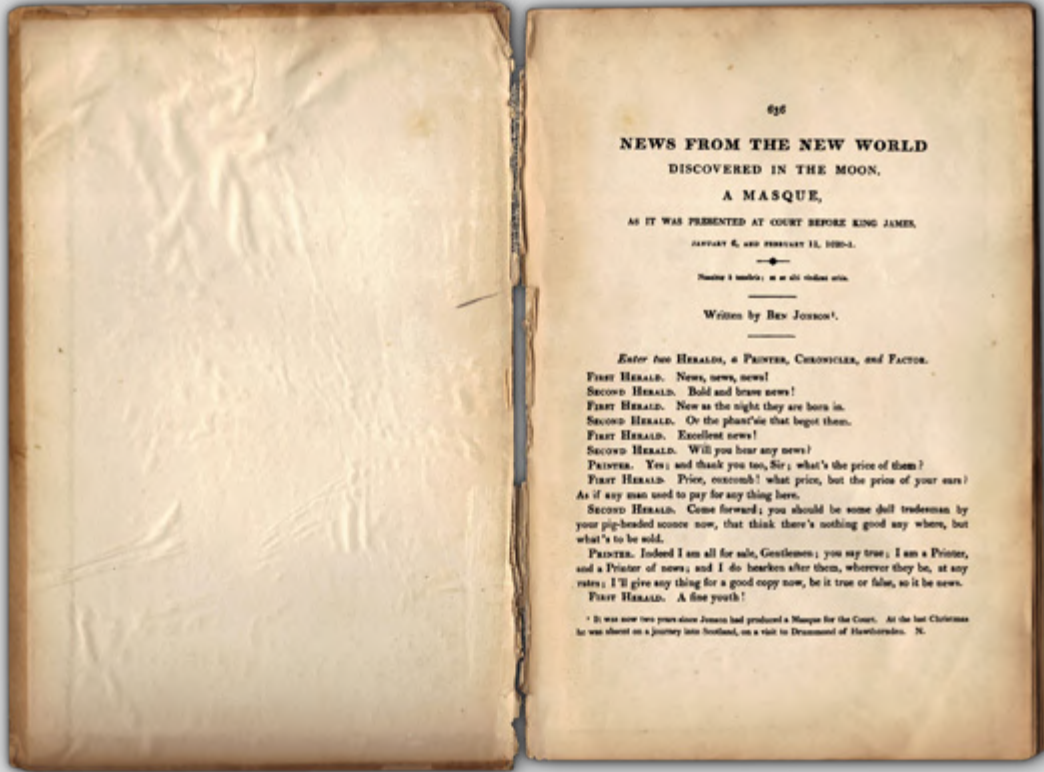
6 Strauss, Valerie. “Analysis | Word of the Year: Misinformation. Here’s Why.” Washington Post, December 10, 2018. <https://www.washingtonpost.com/education/2018/12/10/word-year-misinformation-heres-why/>.  
7 Edelman. “2021 Edelman Trust Barometer,” n.d. <https://www.edelman.com/trust/2021-trust-barometer>.  
8 Ibid, p. 24.  
9 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.



A Closer Look 1:

A Very Short History of Mis- and Disinformation

By John Maxwell Hamilton and Heidi Tworek



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**NEWS FROM THE NEW WORLD**  
DISCOVERED IN THE MOON.  
A MASQUE,  
AS IT WAS PERFORMED AT COURT BEFORE KING JAMES.  
JANUARY 6, AND FEBRUARY 11, 1622.  
—♦—  
Written by BEN JONSON.  
—♦—  
Enter two HERALDS, a PRINTER, CHRONICLER, and FACTOR.  
FIRST HERALD. News, news, news!  
SECOND HERALD. Bold and brave news!  
FIRST HERALD. New as the night they are born in.  
SECOND HERALD. Or the phant'sie that begot them.  
FIRST HERALD. Excellent news!  
SECOND HERALD. Will you hear any news?  
PRINTER. Yes; and thank you too, Sir; what's the price of them?  
FIRST HERALD. Price, enough! what price, but the price of your ears?  
As if any man used to pay for any thing here.  
SECOND HERALD. Come forward; you should be some dull tradesman by your pig-headed sounce now, that think there's nothing good any where, but what's to be sold.  
PRINTER. Indeed I am all for sale, Gentlemen; you say true; I am a Printer, and a Printer of news; and I do hearken after them, wherever they be, at any rates; I'll give any thing for a good copy now, be it true or false, so it be news.  
FIRST HERALD. A fine youth!  
\* It was now two years since Jonson had produced a Masque for the Court. At the last Christmas he was absent on a journey into Scotland, on a visit to Drummond of Hawthornden. 76.

**1 Herald. News, news, news!**  
**2 Herald. Bold and brave news.**  
**1 Herald. New as the night they are born in.**  
**2 Herald. Or the phant'sie that begot 'em.**

Ben Jonson  
*News of the New World*

In 1622 a London printer named Nathaniel Butter made journalism history by starting the first British newspaper. This was a step forward from the piddly so-called manuscript news services that were available to gentry and political leaders who could hire someone to compile snippets of current affairs information from abroad. Now, thanks to Butter, many people could imbibe the news.

From the seed of Butter’s *The News of this Present Week* grew into a flourishing news industry that enlarged the sphere for public discourse throughout Europe. “Soon after the birth of printing,” said Louis-Sébastien Mercier, a keen observer of the French court scene in the 1780s, “everything had a general and clearly distinguishable tendency toward perfect.” By the nineteenth century, members of the British Parliament expressed concern that they no longer held much power, given the sway of journalism on British subjects. These same ideas lapped up on the shores of the United States, where Founding Father Thomas Jefferson said, “Were it left to me to decide whether we should have government without newspapers, or newspapers without a government, I should not hesitate a moment to prefer the latter.”

A Closer Look 1 (continued):

But something else about Butter’s newspaper endured as well. *The News of this Present Week* was disreputable. It was not just that Butter had a shaky grasp on grammar and proofreading. Or that his inconsistency as to what constituted news was a defining feature of the newspaper, which he variously titled — in addition to *The News of this Present Week* — *The Last News*, *More News*, and *Brief Abstracts out of Divers Letters of Trust, Relating the News of the Present Week*. The problem was more profound than any of those shortcomings. It was that when Butter published something that was not trivial, much of it was made up. And this, too, would take hold with newspapers that sprang up elsewhere. To go back to Jefferson, we have his pronouncement, “Nothing can now be believed which is seen in a newspaper. Truth itself becomes suspicious by being put into that polluted vehicle.”

If anyone deserves credit for being the first critic of disreputable faking, it is Butter’s contemporary playwright Ben Jonson. Shortly before Butter printed his first weekly on Fleet Street, which would become London’s newspaper district, Jonson noted the “curious uncertainties” that pervaded manuscript news services in *News of the New World*, from which the quote at the top of this essay is taken. Five years later Jonson attacked Butter directly in a satirical play called *The Staple of News*.

And so it came to pass that an innovation promising greater enlightenment arrived hand-in-hand with news that brought forth confusion, derision, and fear. Although President Donald Trump credited himself with coining the term “fake news,” it has been in circulation for years. At the turn of the last century, books appeared with such titles as *Fakes in American Journalism* (1914) and *Facts and Fakes About Cuba* (1897). The latter book exposed the false news that American correspondents wrote about the Spanish-American War.

These tidbits of history are worth recalling when we look at the mounting concerns in recent years over fake news.

Technology has contributed to the proliferation of bogus journalism. Today, fake news travels far and wide with the blink of an eye. Also, technology allows for anonymous reporting, which means that “journalists” who purvey this “news” often do not have to take the heat for their actions.

But as powerful as technology is, the root cause of fake news lies in human nature. When masses of people acquired greater ability to think for themselves — to uncover facts and report them — they often found it more fun and profitable to make things up.

The rise of fact-based journalism in the 20<sup>th</sup> century helped to curb some of these excesses. The costs of entry to newspaper publishing soared, something that Upton Sinclair decried back in 1919 in his muckraking *Brass Check*. Few could afford to buy expensive presses and populate newsrooms with talented reporters. The thriving newspapers that were established became more professional, not only because journalists liked the idea (they were respected and paid more) but also because owners realized it was good business to provide high quality news. That fare attracted advertisers who sought credibility, although this model was not without its many flaws and the coverage not without lacunae.

That economic model is now broken, thanks in part to technological change. Advertisers don’t need newspapers as they did before. And the hegemony of principled editors over the news has eroded. Once upon a time, no newspaper would publish a story that claimed Hillary Clinton was running a child sex ring out of a pizza parlor. Now the best newspapers must do so, even if to discredit the story.



A Closer Look 1 (continued):

Which gets us to another human factor in fake news. People glom on to news that confirms their biases, as history also tells us. Germans believed that Kaiser Wilhelm II had abdicated on November 9, 1918, because it made sense in the dying days of World War I. In fact, the news was spread by Chancellor Max von Baden, who wanted to forestall revolution in Berlin. Only weeks later would the Kaiser actually abdicate — from his base of exile in the Netherlands. Because the abdication story makes intuitive sense, almost all history books still repeat the wrong narrative about the Kaiser’s abdication.

Today, when the *New York Times* seeks to discredit fake news, it often achieves the opposite result of what was intended: Readers are reminded of the story, and those who believed the story in the first place are likely to hold their view more firmly. After all, if you believe that Hillary Clinton is into sex trafficking, you are likely to believe the *New York Times* is covering it up. We offer this little history lesson not to suggest that improvements are hopeless. We offer it to suggest that improvements will not come unless root causes are considered.

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Heidi Tworek is Associate Professor of International History and Public Policy at the University of British Columbia, Vancouver, Canada, as well as a senior fellow at the Centre for International Governance Innovation and a non-resident fellow at the German Marshall Fund of the United States. Her most recent book is *News from Germany: The Competition to Control World Communications, 1900-1945*, which won the Wiener Library Ernst Fraenkel Prize and the Ralph Gomory Prize.

Technology has changed how quickly and transparently we see things for ourselves. While transparency has benefits, it also has a downside; as more people see how previously opaque issues like public policy and science can evolve, their confidence is shaken, and even more so as malign actors increasingly deploy sophisticated manipulation techniques on a wider basis. The old arbiters have disappeared, and we can see science and policymaking happening in real time under a constant barrage of legitimate, often well-intentioned questions and deliberately sown misinformation intended to cast doubt and cause inaction (at best) or harmful action (at worst).

For example, scientific understanding and public health policy in the COVID-19 pandemic changed as new evidence came to light (**see a Closer Look 2**). Directives from public health authorities on matters such as wearing a mask or wiping shopping bags evolved as the pandemic progressed. This led many to question who and what they could trust as reliable sources of information, especially when public health officials changed their own initial instructions (e.g., “no need

to wear masks” became “everyone must wear masks”) as they learned more about transmission. This distrust led some to view the scientific community’s guidelines with skepticism and, as a result, those individuals chose to rely on information or sources without grounding in scientific facts.

Malign actors took advantage of this transparency and evolving science with deliberate efforts to sow confusion and discontent. A growing body of evidence shows that malign actors deliberately “flood the space,” overwhelming consumers with so much information and disinformation that people begin to tune out altogether or mistake disinformation for facts because they are unable to sift through the noise. Even a small number of misinformation spreaders can have an enormous impact. For example, according to a report by the Center for Countering Digital Hate (CCDH), 65 percent of vaccine disinformation was spread by 12 individuals.<sup>10</sup> When information complexity overwhelms human processing capability, we fall back on simplifying heuristics, with those heuristics tending to be our pre-existing beliefs and values.<sup>11</sup>

More extreme examples of the impact of misinformation can manifest from fear and lack of knowledge. For example, there were concerns about the impact of mobile technologies and the inaccurate correlation between 5G and COVID-19, leading to protests on 5G and individuals damaging the infrastructure required to support these networks.

At the same time, information consumers increasingly recognize the need to better understand how misinformation impacts them. In the 2021 Edelman Trust Barometer survey respondents indicated that improving media and information literacy ranks second behind prioritizing their families and their needs.<sup>12</sup>

A Closer Look 2:

COVID-19 and the Differences Between Misinformation and Disinformation

With so many questions about “truth” and so many sources of mistrust, many people have lost nearly all faith in experts or institutions. Mistrust has led many people to form opinions around specific beliefs or ideologies and others struggle to distinguish between fact and opinion in an increasingly polarized society, particularly on topics that are highly sensitive or politically driven. We distinguish here between deliberate disinformation campaigns on COVID-19 versus the impact of individuals’ pre-existing beliefs. In the case of COVID-19, many vaccine skeptics describe how the vaccines developed for COVID-19 were developed at a much faster rate than previous ones. This information is not necessarily untrue, as receiving a dose of the COVID-19 vaccine prior to August 2021 came with a disclaimer that it was approved on an emergency basis by the FDA.<sup>13</sup> Some people may choose to publicly share that they will not be getting a COVID-19 vaccine because of this legitimate skepticism surrounding its fast development, new technologies that are being used, or very small numbers experiencing extreme side effects.

Other skeptics claim not to get a COVID-19 vaccine because it is a mechanism for Bill Gates and/or the Central Intelligence Agency to implant them with microchips that will control them for the rest of their lives.<sup>14,15</sup> Both arguments are based on fear and strongly held beliefs about vaccinations, and they also have harmful effects at present. The first example, however, presents skepticism based on a realistic concern while the other represents skepticism born from disinformation. Differentiating between these different strains is paramount to modernizing our approach to countering misinformation and disinformation.

10 Center for Countering Digital Hate (CCDH). “The Disinformation Dozen,” n.d. <https://www.counterhate.com/disinformationdozen>.  
11 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.

12 Edelman. “2021 Edelman Trust Barometer,” n.d., p. 27. <https://www.edelman.com/trust/2021-trust-barometer>.  
13 LeVan, Kristina. “COVID Questions: Is Vaccine Approved? What to Expect Afterward?” University of Wisconsin-Madison News, February 11, 2021. <https://news.wisc.edu/covid-questions-approved-vaccines-what-to-expect-after-vaccine/>.  
14 Brown, Matthew, and Elizabeth Weise. “Fact Check: Bill Gates Is Not Planning to Microchip the World through a COVID-19 Vaccine.” USA TODAY, June 12, 2020. <https://www.usatoday.com/story/news/factcheck/2020/06/12/fact-check-bill-gates-isnt-planning-implant-microchips-via-vaccines/3171405001/>.  
15 Sandhu, Parwinder. “Next Pandemic Will Get Attention: Video Clip of ‘Smirking’ Bill and Melinda Gates Draws Ire Online,” July 10, 2020. <https://www.ibtimes.sg/next-pandemic-will-get-attention-video-clip-smirking-bill-melinda-gates-draws-ire-online-48228>.



Case Example 1:

Spotlight on Africa

Disinformation and its Pernicious Effects

From colonization and slavery to recent genocide, information has been weaponized to exploit the people of Africa throughout history. This history of external influences in the continent has shaped how modern disinformation manifests across cultures and nations. In some places in sub-Saharan Africa, fear of the COVID-19 vaccine has both fueled and been fueled by hesitancy or rejection of other tried and proven vaccines of nearly eradicated diseases.<sup>16</sup> The COVID-19 vaccines in the U.S. were initially approved on an emergency basis compared with vaccines that have been around for decades.<sup>17</sup> Yet in the interest of undermining western credibility, bad actors continue to incite fear and undermine health experts and trust in government in the name of great power competition.

This is not a new phenomenon. In the 1980s and 1990s, Russia used information warfare on the public health crisis of HIV, spreading information that HIV was created in a lab by the U.S. government.<sup>18</sup> Today, Russia continues to attempt to discredit the U.S. as they have spread disinformation about U.S.-generated COVID-19 vaccines to bolster their own vaccine (Sputnik V).<sup>19</sup> Sputnik V has not undergone as many clinical trials as western vaccines such as Moderna or Pfizer, but it has received significant media attention and gained popularity across countries in Africa as a result of Russia’s media campaign strategy.<sup>20</sup> Russia has focused on early messaging, specifically in Mozambique, Nigeria, and South Africa to boast about the vaccine’s efficacy (despite limited trials) in order to counter Chinese and U.S. influence.<sup>21</sup>

16 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in sub-Saharan Africa in the Era of COVID-19.” April, 2021.  
17 Research, Center for Biologics Evaluation and. “Emergency Use Authorization for Vaccines Explained.” FDA, December 14, 2020. <https://www.fda.gov/vaccines-blood-biologics/vaccines/emergency-use-authorization-vaccines-explained>.  
18 Kirk, Katherine. “How Russia Sows Confusion in the U.S. Vaccine Debate – Foreign Policy.” Foreign Policy, April 9, 2019. <https://foreignpolicy.com/2019/04/09/in-the-united-states-russian-trolls-are-peddling-measles-disinformation-on-twitter/>.  
19 Vinograd, Samantha. “Opinion: With Vaccine Rollout Comes Onslaught of Disinformation.” CNN, December 14, 2020. <https://www.cnn.com/2020/12/14/opinions/russian-misinformation-trump-covid-vaccine-vinograd/index.html>.  
20 Campbell, John. “Russian Disinformation Popularizes Sputnik V Vaccine in Africa.” Council on Foreign Relations, December 10, 2020. <https://www.cfr.org/blog/russian-disinformation-popularizes-sputnik-v-vaccine-africa>.  
21 Ibid.

A Closer Look 3:

Misinformation, Confirmation Bias, and Trust Deficits

In contrast to deliberately or intentionally harmful information campaigns, we see misinformation spread or believed because of the human tendency to seek out information that confirms our pre-existing beliefs or validates our experience with specific historical events. The tension between a lower carbon future and nuclear power illustrates this challenge. On the one hand, nuclear power has a scientifically demonstrated low carbon footprint, a strong safety record overall, and the potential to put a huge dent in society’s energy needs while helping avert catastrophic climate change. At the same time, the few safety accidents resulting from nuclear energy stick out in our minds — even if on balance the totality of those accidents remains much lower than the totality of accidents and environmental damage done by high-carbon alternatives. But without public acceptance of nuclear energy or trust in those that would manage it, wider use remains an uphill battle.<sup>22</sup>

Similarly, the example of tobacco harm reduction represents misinformation spurred by strongly held beliefs in the face of new science. It is universally accepted that cigarettes are harmful, causing death and serious illness. The controversy and emotional responses around cigarettes lies in how to address the problem of smoking. New non-combustible products have emerged in the tobacco market and companies like Philip Morris International (PMI), an underwriter of this report, have opened up to the public to communicate how these products represent a better alternative for adult smokers who would otherwise continue to smoke, compared with traditional cigarettes. False narratives around the health effects of e-cigarettes vs. conventional cigarettes have harmful consequences for smokers that make choices in preference of conventional cigarettes based on misinformation about e-cigarettes. Reputable institutions such as the World Health Organization have drawn conclusions and framed issues about the harm that e-cigarettes cause in ways that carry significant weight in the scientific community’s assessment of these products and thus impact public perception of them.<sup>23</sup>

While the scientific community has studied the effects of non-combustible products, many people do not want to accept new information because they have an emotional response to an actor that historically does not have a strong trust record. Companies like PMI have made commitments to support an industry-wide phase out of cigarettes within 10-15 years given the right regulatory conditions, and are putting themselves in the public eye to build transparency and confront public fears about their products and past reputation. These efforts also aim to communicate reason and science to broad audiences that have already formed an opinion based on misinformation.

Many other companies battle similar reputational challenges grounded in misinformation or strongly held beliefs. During 2020-2021, Boeing dealt with cancelled airplane orders driven by COVID-19 travel restrictions, compounded by lingering skepticism from earlier crashes and safety issues with the 737 MAX.<sup>24</sup> Boeing faced a trust deficit even before the pandemic started because of several denials and allegations related to the 737 MAX.<sup>25</sup> To overcome this trust deficit and address passenger concerns about getting infected with COVID-19 while flying, Boeing had to explain how its air filtration systems work using a set of short videos, which helped restore some confidence, but not for everyone. Many people continue to distrust big companies that have a self-interest to get people to travel again, leaving individuals wondering whether companies are being honest or are only concerned with revenue generation, further fueling distrust.

In each of these case examples — tobacco and air travel— the goal of public and corporate policy along with individual behavior change messaging is not zero risk, but risk reduction.<sup>26</sup>

22 TerraPower. “About Us,” n.d. <https://www.terrapower.com/about/>.  
23 Snowdon, Christopher. “The Impact Of COP9 On Vapers.” Institute of Economic Affairs, Property Rights Alliance, Summer 2021, 15. <https://www.propertyrightsalliance.org/wp-content/uploads/Impact-Of-COP9-On-Vapers.pdf>.  
24 The Seattle Times. “Boeing Burns through Cash, Suffers Sixth Straight Quarterly Loss,” April 28, 2021. <https://www.seattletimes.com/business/boeing-aerospace/hit-both-by-pandemic-and-quality-problems-boeing-reports-more-losses/>.  
25 The Financial Times. “Can Boeing’s 737 MAX regain passengers’ trust,” November 16, 2020. <https://www.ft.com/content/63e8d2b6-4d23-44d8-91a0-db5b720f2a64>.  
26 “Product Health Impacts,” n.d. <https://www.pmi.com/integrated-report-2019/innovating-for-better-products/product-health-impacts>.



Case Example 2:

Spotlight on Japan

Emotional Response to Risk, Vaccines, and Masks

People are willing to tolerate or cling to inaccuracies if it serves their emotional, political, or ideological beliefs.<sup>27</sup> The challenge in communication around issues that incite emotional or politicized responses is clearly demonstrated in the discussion around the effectiveness of wearing masks to prevent disease. While Japan has the advantage of the shared cultural understanding that masks are a first line of defense in the spread of disease, this topic has become highly politicized in the U.S., leading to constant confusion around the data and science that supports their use.

In responding to COVID-19, Japanese people had a few built-in advantages. First, physical contact is not as prevalent in Japanese culture (e.g., bowing instead of handshaking) and, as a culture, they care deeply about personal and collective hygiene (e.g., removing shoes when entering a home).<sup>28</sup>Second, the U.S. and other western countries suffered from a cognitive bias: all their pandemic plans assumed a flu-like virus, similar to the 1918 flu pandemic. In contrast, Japan and other Asian countries assumed a corona-like virus similar to SARS/ MERS. Lastly, Japan had lived through the pre-World War II period and had experience with deliberate, state-led misinformation and disinformation, and overreach through censorship. In combination, these factors meant Japanese people had a predisposition to combatting airborne infection through things like wearing masks and social distancing, and the Japanese government had a template for what *not* to do when it came to regulating social media in response to COVID-19.<sup>29</sup>

In contrast, the case for clean energy products like nuclear power in Japan has seen emotional blowback. While a cleaner and safer option than petrochemicals, the scare factor associated with nuclear power resulting from Japan's historical experience with atomic bombs during WWII, as well as an earthquake and subsequent tsunami that impacted the Fukushima Daiichi nuclear power plant,<sup>30</sup> makes it challenging to communicate the benefits of nuclear power to the general population.

While disinformation has expressed itself differently across issues and geographies, we can discern some consistent patterns:

- **The pace and degree of information sharing have accelerated so dramatically that it has removed the traditional time that institutions used to have to make and coherently communicate decisions.**
- **When government or public officials provide inconsistent or contradictory messages or worse yet, no communication at all, it skews people's judgment around what they believe to be true.**
- **Messaging is an important component of addressing misinformation. If it is not tailored to the target**

**audience and easily comprehensible, it leaves room for misinterpretation, which can lead to the spread of misinformation.**

- **Poor messaging tactics can negatively impact the reputation of governments or local authorities in providing reliable information.**

Messaging must acknowledge the resources and knowledge of local communities to avoid misinformed actions that result from misinformation. For example, in sub-Saharan Africa when early reports indicated wildlife as a potential source of COVID-19, many anecdotal reports from communities indicated this information incited fear of wildlife and led people to retaliate against wild animals and even against domestic animals like pigs

and cows. For communities that interact closely with these animals, public officials should have taken into account the fears this link may have caused and tailored initial messaging and follow up messaging to avoid this unintended consequence.

In retrospect, they needed to utilize appropriate language and consider the right channels of communication. Instead, messaging often backfired due to lack of cultural context. For example, in response to this retaliatory behavior towards animals, local organizations sought to calm fears by inciting an emotional response using an image of a kitten in their messaging; however, there is widespread superstition about cats in these communities, so the idea was quickly shut down.<sup>31</sup>

In another example in a rural, indigenous community in northern Colombia, the Colombian central government informed this community to use handwashing to prevent the spread of COVID-19. While this community has limited access to health resources, it interacts with other communities and tourists, which meant that keeping the virus out of their community represented a critical challenge. As a result of water shortages from a recent drought, the community felt they had to choose between accessing water for consumption or for handwashing.<sup>32</sup> Even basic protocols such as handwashing need to be communicated in ways relevant to different communities or they will not succeed.

The connection between ineffective communication and misguided action has been an issue long before the onset of COVID-19. In 2007, communities in Bangladesh ignored early warnings from government officials to evacuate as tropical Cyclone Sidr approached, resulting in more than 1,000 deaths. This deadly lack of response can be directly related to a false tsunami alert and subsequent evacuation just two months earlier, which had eroded the public's trust in their country's well-established early warning system.<sup>33</sup>

Authorities serving as truth-tellers need to not only find the truth but communicate it effectively so that the public can easily understand, remember, and act on the information. For instance, in the early stages of the pandemic, the U.S. Centers for Disease Control and Prevention (CDC) recommended against wearing masks, but they did not sufficiently explain their guidance. They needed to help the public understand that masks are highly effective in stopping the spread of the virus, but that due to the limited supply available at the time, they must be prioritized for healthcare workers. This lack of initial communication created confusion and contributed to mistrust among the public when the CDC later altered their guidance that everyone should wear masks.

**Conclusion:** People and societies need a better understanding of the differences between disinformation and misinformation, as well as new tools and frameworks for dealing with both. Institutions that would be purveyors of the truth need to invest as much in communicating the truth effectively as they do in finding the truth. Organizations need guidance from experts and institutions on how to communicate in crisis to retain public trust — early decisions they make about how, what, and when to communicate are very difficult to change post-hoc.

27 Lewandowsky, Stephan, Ullrich K. H. Ecker, Colleen M. Seifert, Norbert Schwarz, and John Cook. "Misinformation and Its Correction: Continued Influence and Successful Debiasing." *Psychological Science in the Public Interest* 13, no. 3 (December 1, 2012): 106–31. <https://doi.org/10.1177/1529100612451018>. <https://journals.sagepub.com/doi/full/10.1177/1529100612451018>

28 Fritz, Martin. "Coronavirus: How Japan Keeps COVID-19 under Control | DW | 25.03.2020." *DW.COM*, March 25, 2020. <https://www.dw.com/en/coronavirus-how-japan-keeps-covid-19-under-control/a-52907069>.

29 Ibid. "Virtual Consultative Roundtable on Information Literacy in Japan in the Era of COVID-19." February, 2021.

30 Timeline of Japan's 2011 quake, tsunami and nuclear disaster. (2021, March 10). *AP NEWS*. <https://apnews.com/article/japan-accidents-tsunamis-earthquakes-42d4947609becd7f141e9524a8c98937>

31 "Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in sub-Saharan Africa in the Era of COVID-19." April, 2021.

32 "Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19." February, 2021.

33 A. (2013, February 6). Crying wolf over disasters undermines future warnings. *SciDev.Net*. <https://www.scidev.net/global/opinions/crying-wolf-over-disasters-undermines-future-warnings/>



**Case Example 3:****Spotlight on Africa***Messaging Has an Impact on People's Trust in Experts and Institutions*

Inconsistent or unreliable government communications have led to mistrust among citizens of African nations, especially during COVID-19. Due to various historical political and sociocultural factors, many find it difficult to receive reliable public health guidelines and instead rely on unconfirmed anecdotal reports, especially in rural areas.<sup>34</sup> Moreover, as the Afrobarometer points out, the majority of people living in the African continent (54 percent) did not trust their elected political leaders, even though more than 78 percent of the same population accepted their legitimacy.<sup>35</sup>

In many cases, the public relies on government authorities to share information regarding whether to report to work, school, and general day-to-day living, but when it comes to health, they balk, which has had a direct negative impact on health systems, education, and the economy. Even with proactive measures, citizens can be skeptical of information from the government. The Ghanaian government used public sector organizations and free and independent media sources to help promote the need for compliance with lockdown measures.<sup>36</sup> In Nigeria, South Africa, and Uganda, governments used security forces to enforce lockdown measures, which contributed to greater resentment and distrust toward the government, especially when the enforcement of restrictive measures posed greater threats to citizens than the virus itself.<sup>37,38,39</sup>

Conversely, when information is shared, conflicting messages are often disseminated, leading to confusion among the public. In many instances, government leaders have distributed messaging around COVID-19 safety protocols while exhibiting contradictory behaviors. This inconsistent and sporadic dissemination of information by government officials left the public feeling intentionally misled. One of the most effective avenues for combating this trend has been through leveraging small, local community-based organizations that can translate dense scientific and data-based information into terms that all communities can understand.

34 Okereke, Melody, Nelson Ashinedu Ukor, Lilian Muthoni Ngaruiya, Chikwe Mwansa, Samar Mohammed Alhaj, Isaac Olushola Ogunkola, Hadi Mohammed Jaber, Mashkur Abdulhamid Isa, Aniekian Ekenyong, and Don Eliseo Lucero-Prisno. "COVID-19 Misinformation and Infodemic in Rural Africa." *The American Journal of Tropical Medicine and Hygiene* 104, no. 2 (February 3, 2021): 453–56. <https://doi.org/10.4269/ajtmh.20-1488>.

35 "Analysis | Many Africans Distrust Their Governments. How Will That Affect Their Coronavirus Response?" *Washington Post*. <https://www.washingtonpost.com/politics/2020/05/01/many-africans-distrust-their-governments-how-will-that-affect-their-coronavirus-response/>; "Afrobarometer," n.d. <https://afrobarometer.org/>.

36 Mao, Jiaqi Zhang, Justice Nonvignon, and Wenhui. "How Well Is Ghana—with One of the Best Testing Capacities in Africa—Responding to COVID-19?" *Brookings* (blog), July 28, 2020. <https://www.brookings.edu/blog/future-development/2020/07/28/how-well-is-ghana-with-one-of-the-best-testing-capacities-in-africa-responding-to-covid-19/>.

37 France 24. "Security Forces Use Violent Tactics to Enforce Africa's Coronavirus Shutdowns," April 1, 2020. <https://www.france24.com/en/20200401-security-forces-use-violent-tactics-to-enforce-africa-s-coronavirus-shutdowns>.

38 "Coronavirus: Security Forces Kill More Nigerians than Covid-19." *BBC News*, April 16, 2020, sec. Africa. <https://www.bbc.com/news/world-africa-52317196>.

39 Human Rights Watch. "Uganda: Respect Rights in COVID-19 Response," April 2, 2020. <https://www.hrw.org/news/2020/04/02/uganda-respect-rights-covid-19-response>.



## Trend #2: The acceleration of digital technologies has made information more accessible and shareable, increasing the speed at which lies spread

***“A lie gets halfway around the world before the truth has a chance to get its pants on.”***

— Sir Winston Churchill

More people know more than ever before. This has unlocked huge potential for improving lives. The internet serves as a platform for innovation, enabling start-ups, institutions, governments, nongovernmental organizations (NGOs), and individual users to rapidly develop and bring to market new products and services.<sup>40</sup> While a digital divide still exists, there has been a transition from the connected economy of PCs, browsers, and web servers to an increasingly hyperconnected economy of pervasive, inexpensive mobile devices, broadband wireless networks, and cloud-based applications.

Internet access and mobile phones have moved rapidly from being viewed as a luxury to a necessity that increasing numbers of people can now afford. Over the coming decade, McKinsey estimates up to 3 billion additional people will connect to the internet with mobile devices and wireless networks, thus joining the global digital economy and facilitating financial inclusion and local entrepreneurship.<sup>41</sup>

It also means, in part because humans tend to share negative or sensationalist news more than nuanced information, that a well-constructed lie — often built on a kernel of truth — can spread much faster than a complicated truth. A 2018 study by MIT researchers found that false stories are 70 percent more likely to be retweeted than true stories.<sup>42</sup> According to their data, it takes true stories about six times as long to reach 1,500 people as it does for false stories to reach the same number of people.<sup>43</sup> Sir Winston was right.

40 Wladawsky-Berger, Irving. "Will the Digital Revolution Deliver for the World's Poor?" n.d., 6. <https://www.brookings.edu/wp-content/uploads/2016/07/WladawskyBergerWilltheDigitalRevolutionDeliver.pdf>.

41 Ibid.

42 Dizikes, Peter. "Study: On Twitter, False News Travels Faster than True Stories." *MIT News* | Massachusetts Institute of Technology, March 8, 2018. <https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308>.

43 Ibid.



A Closer Look 4:

Tobacco Harm Reduction: When to Trust Actors with A History of Public Mistrust?

Some tobacco companies have made recent attempts to create and sell new products that reduce harmful effects on consumers. Their past behavior has led some critics to persist in opposition, even in the face of scientific data demonstrating reduced exposure to harm, and for some critics to push narratives that lack evidence. This is due in part to the fact that individuals have strongly held beliefs about tobacco and tobacco companies. Two recent examples in the U.S. and Colombia illustrate how narratives built on inaccurate or misleading information can have harmful effects on consumers.

**U.S. and Tobacco Harm Reduction:** In late 2019, there were several cases across the U.S. of EVALI (which stands for e-cigarette, or vaping product use-associated lung injury) in people using e-cigarettes and vaping products.<sup>44</sup> The media prematurely established correlation and causation between vaping and EVALI before the facts were uncovered by the experts, and it eventually led to bans of vaping and e-cigarettes in some parts of the U.S.<sup>45</sup> Misinformation about non-corroborated dangers of vaping and e-cigarettes led many individuals who had quit smoking to return to conventional cigarettes out of fear, creating more harmful health effects. The actual investigation ultimately found that EVALI was caused by unregulated, uncontrolled, and potentially adulterated liquids in vaping and e-cigarette products. Reports by the CDC found a strong correlation between EVALI and tainted liquid, modified by either users or authorized sellers.<sup>46,47</sup> This case reflects the need for factual, objective, and scientific information for the protection of public health and appropriate regulation. Furthermore, this illustrates the problem with releasing too much information before the root cause of a health issue is identified.

**Colombia and Tobacco Harm Reduction:** In Colombia’s Congress, legislators recently considered a proposed bill that rejected evidence-based approaches to regulating tobacco products according to the risk they pose, effectively eliminating the possibility for harm reduction in Colombia. The bill’s objective was to equalize all tobacco products under uniform regulation, disregarding evidence backed by science and policy experience from other countries like the U.S., U.K., E.U., Japan, and New Zealand, which have recognized the difference between combustible and non-combustible tobacco and nicotine products. Other bills offering science-based approaches to regulating new innovations and differentiating tobacco products according to their risk were presented in Congress last year but did not gain support. Further, although ICONTEC (Colombian Institute of Technical Standards and Certification) approved a technical directive that differentiates products based on risk, there have been reports of civil society organizations (CSOs) and NGOs promoting misinformation on how products or innovations work and pushing to regulate conventional and smoke-free products similarly. Without evidence-based conversations on how to regulate these products to help adult smokers, Colombia is faced with ideological-driven resistance from public health organizations and NGOs that promote misinformation.

For most of history, producing content has been cost-prohibitive and media companies and regulatory bodies have played large roles in what should and should not reach the public. The digitalization of media has greatly diminished the traditional cost, technological, and institutional barriers to publishing. With high-definition cameras and high-quality microphones in everyone’s pocket and easy access to free online publishing platforms, average citizens can create, spread, or share

content anytime and anywhere, unburdened by editors and fact-checkers. The tools and technology that journalists have depended on to separate themselves as distinct, trusted sources of information are now available to all. Both the capital intensity and the number of human resources focused on combating the spread of misinformation have significantly decreased while professional media business models have all but collapsed. Today, anyone can become their own mass

media outlet, able to anonymously post, publish, or distribute content without justification or accountability for accurate information.<sup>48</sup> For example, CCDH’s tracking of social media accounts focused on anti-vaccination shows that “the 20 anti-vaxxers with the largest followings account for over two-thirds of the total cross-platform following of 59.2 million.”<sup>49</sup>

The shame of getting facts wrong no longer acts as a deterrent as society has shifted from information scarcity to information overload. Where once we experienced unrest and confusion due to a *lack* of information, we now suffer from confusion and false confidence due to an excess of information coming through at lightning speed. This overload of information has dramatically changed processes around media and reporting, further blurring the line between opinion and fact.<sup>50</sup>

Many media companies still uphold editorial guidelines and standards that place an emphasis on reporting factual information. At the same time, the speed at which information spreads has impacted how consumers absorb new information. This has led some media companies to put greater emphasis on the speed of their reporting rather than accurate, data-driven, and well-sourced reporting. These practices by media companies can lead to an oversimplification of messaging and increased opportunity for misinformation and disinformation to be shared at increasingly rapid rates.<sup>51</sup>

Previously entrenched media business models are collapsing in the wake of new technologies. This may explain why the Edelman Trust Barometer timeline in 2021 was entitled “Declaring Information Bankruptcy.”<sup>52</sup> The traditional mainstream media actors of newspapers, radio, and television have pushed their business models to meet the needs of their consumers by going digital. These same media businesses have long relied on subscription models and advertising (especially classified ads) for revenue, making them particularly vulnerable to changes in viewership or attitudes toward content. This audience dependence has forced media companies to adapt to consumer demands, but there are fears around the loss of journalistic integrity. In fact, 59 percent of respondents to the 2021 Edelman Trust Barometer indicate that “journalists and reporters are purposely trying to mislead people by saying things they know are false or gross exaggeration.”<sup>53</sup>

New mediums for producing and sharing content have challenged media companies to enter the era of clickbait in which journalists are rewarded for the “clicks” they get on an article. This has fueled a frenzy of catchy, attention-grabbing headlines that entice readers to click. It has also led journalists down a tricky path between honest reporting and manipulating titles that may bend the truth to pass the editor’s desk. This new wave of journalism has reinforced the trend of sensationalism and declining consumer attention spans. A recent study published in the *Financial Times* notes that individuals share fake news not because of malice or ineptitude, but because of impulse and inattention.<sup>54</sup> Findings indicate that people often share misinformation because their attention is focused on factors other than accuracy. For example, in the context of social media, studies show that users focus their attention more intently on factors such as the desire to attract and please followers/friends or to signal one’s group membership. In that vein, individuals may also share misinformation more readily on social media because they are familiar with and trust the source.

In a study conducted via Twitter by Pennycook, G., Epstein, Z., Mosleh, M. et al, findings showed the accuracy of headlines has little effect on sharing intentions, despite having a large effect on judgments of accuracy.<sup>55</sup> For example, political concordance with a post had a significantly larger effect on sharing intentions (19.3 percentage points) than whether the headline was true or false (5.9 percentage points).<sup>56</sup> This dissociation suggests that sharing does not necessarily indicate belief.

Nevertheless, many reputable news sources have made strong efforts to maintain their reputability and integrity in the face of the changing media landscape. For example, NPR and many other news sources have guidelines or a handbook for journalists, which they share with the public to ensure transparency in their reporting.<sup>57</sup> A growing number of unaccredited online actors, however, have emerged as self-proclaimed purveyors of truth, making it increasingly difficult to differentiate between reputable and non-reputable sources. Worse yet, the source of information is subject to less scrutiny by average consumers while information spread by anonymous users is on the rise. As described later in this report, this lack of scrutiny is especially

44 Health, CDC’s Office on Smoking and. “Smoking and Tobacco Use: Electronic Cigarettes.” Centers for Disease Control and Prevention, November 27, 2020. [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html).  
45 Commonwealth of Massachusetts Department of Public Health “Ban on E-Cigarettes and Vaping Products: Frequently Asked Questions” October, 2019. <https://www.mass.gov/files/documents/2019/10/08/Vaping-Ban-FAQ-10-3-19.pdf>.  
46 “Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products | Electronic Cigarettes | Smoking & Tobacco Use | CDC.” Centers for Disease Control and Prevention, 3 Aug. 2021. [www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](http://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html).  
47 Ibid.

48 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.  
49 Center for Countering Digital Hate (CCDH). “The Disinformation Dozen,” n.d. <https://www.counterhate.com/disinformationdozen>.  
50 “Virtual Consultative Roundtable on Information Literacy in Japan in the Era of COVID-19.” February, 2021.  
51 Ibid.  
52 Edelman. “2021 Edelman Trust Barometer,” n.d., p. 3. <https://www.edelman.com/trust/2021-trust-barometer>.  
53 Ibid. p. 25.  
54 Harford, Tim. “What Magic Teaches Us about Misinformation.” *Financial Times*, May 6, 2021. <https://www.ft.com/content/5cea69f0-7d44-424e-a121-78a21564ca35>.  
55 Pennycook, Gordon, Ziv Epstein, Mohsen Mosleh, Antonio A. Arechar, Dean Eckles, and David G. Rand. “Shifting Attention to Accuracy Can Reduce Misinformation Online.” *Nature* 592, no. 7855 (April 2021): 590–95. <https://doi.org/10.1038/s41586-021-03344-2>.  
56 Ibid.  
57 NPR.org. “These Are the Standards of Our Journalism,” n.d. <https://www.npr.org/ethics>.

prevalent on social media platforms, where millions of users get information. According to the 2021 Edelman Trust Barometer, only one in four social media users have good information hygiene, which includes habits such as verifying information and avoiding information echo chambers.<sup>58</sup>

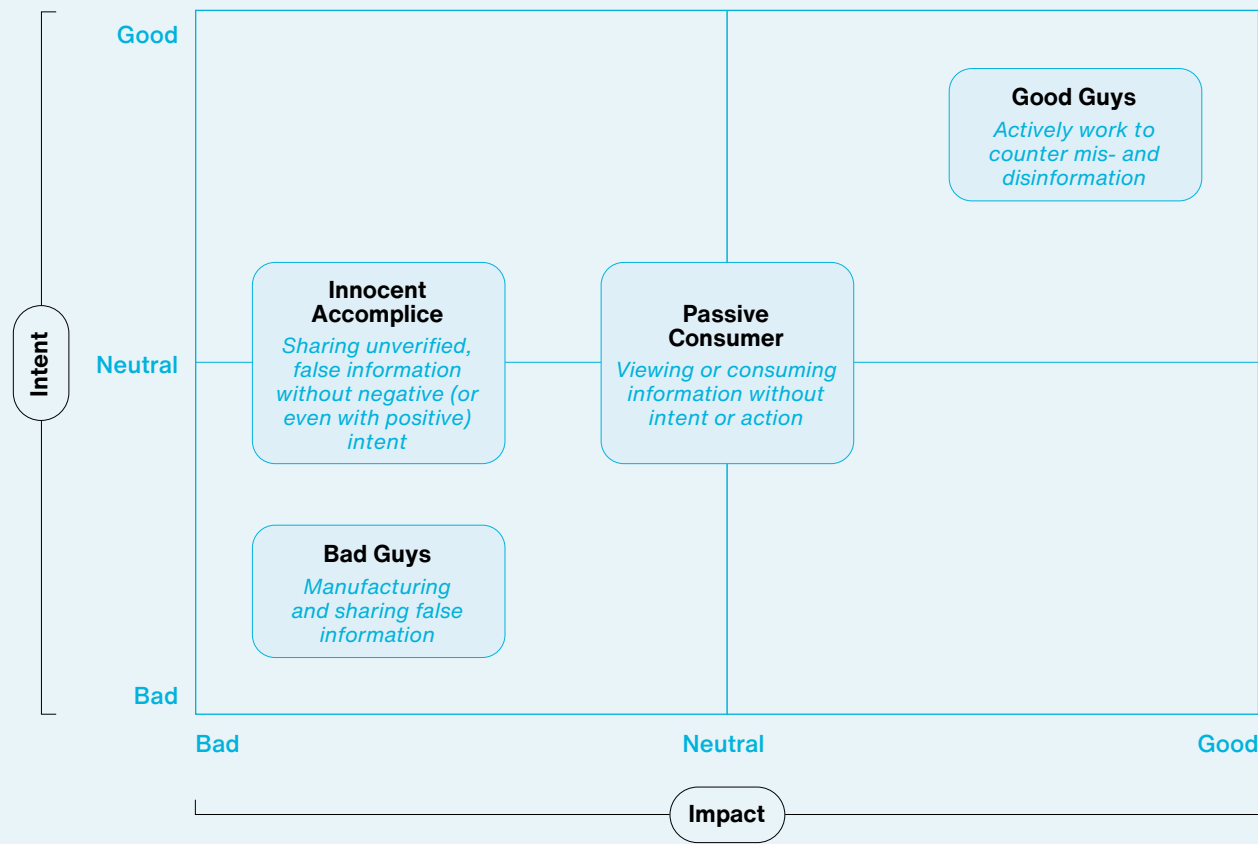
Although the distinction may not always be as clear-cut as this, for simplicity, in this report, we distinguish between “good guys” and “bad guys” and “good” and “bad” actions. “Good guys” are those individuals and organizations that intentionally share verified, accurate information and actively work to counter mis- or disinformation. Conversely, “bad guys” are malign actors that purposefully seed and propagate disinformation and misinformation. We also see two other categories of individuals with varying roles in the spread of misinformation/disinformation: the “innocent accomplice,” who may unwittingly share, albeit with positive intent,

and the “passive consumer,” who may view or consume misinformation and disinformation, but takes no action to spread it.

At the same time, a “good” or “bad” action can be both fluid and context-dependent. Oftentimes, false or inaccurate information can be spread without malicious intent or can even be done with positive intent — by an innocent accomplice, for example — which makes it difficult to characterize an action taken by individuals or organizations as good or bad. It is worth noting, however, that most misinformation begins as disinformation, created for profit or political benefit. In Figure 1 below, we demonstrate the relationship between intent and impact when it comes to spreading mis- and disinformation.

Figure 1 demonstrates the role of intent when it comes to mis- and disinformation.

Figure 1



58 Edelman. “2021 Edelman Trust Barometer,” n.d., p. 28. <https://www.edelman.com/trust/2021-trust-barometer>.

Regardless, the unintentional or intentional spread of mis- and disinformation by individuals causes growing concern especially because increasing anonymity results in a loss of accountability. “Fake news” spreaders need not worry about their reputability and instead concern themselves with whether their false claims or misrepresentation of information gain enough traction to meet their desired outcomes.<sup>59</sup> This is particularly

dangerous in times of public emergencies such as the COVID-19 pandemic because misinformation does influence behavior. According to the Center for Countering Digital Hate (CCDH) report, exposure to even a small amount of vaccine misinformation reduces the number of people willing to take a COVID vaccine by up to 8.8 percent.<sup>60</sup>

Case Example 4:

Spotlight on Sub-Saharan Africa  
*Lies Have Economic Implications*

Western and Eurocentric media have long covered Africa as a troubled continent, emphasizing its difficulties more than its opportunities.<sup>61</sup> This has led many people, and especially businesses and investors, to overestimate the actual risk of living, working, and doing business in Africa. Because many Africa-based media rely on global news networks for some of their coverage, this bias has seeped into even their reporting, resulting in a deficit of Afrocentric journalism and a lack of properly contextualized information that can lead to a misperception of risk.

This history of reporting delegitimizes African governments (referring to them as “regimes”), dis-empowers them, and further severs the relationship between the government and the people. Without global representation of Afrocentric journalism, there is a growing deficit of quality information produced in African nations that accurately reflects African reality — even if the audience is by and large African. This gap in representation discourages investment in Africa and leads even the African audience to believe that the only way to live an aspirational life (as seen on Eurocentric news networks) is to emigrate.<sup>62</sup>

This way of viewing Africa as a continent, along with western-centric perceptions of African nations, significantly impacts their market and economic development. For example, perceived risk and lending bias have a direct impact on Africa’s economy. Misinformation and bias among the global press (primarily English-speaking) pertaining to the African economy have exacerbated the perceived risk by commercial banks and institutions.<sup>63</sup> This essentially forces people and businesses to pay a premium for the same product/capital relative to the rest of the world.<sup>64</sup> This bias and perceived risk directly impact the African economy, creating a humanitarian crisis alongside the economic crisis. There is an opportunity and a need to invest in data-driven insights to improve the attitude around African investment risk and lending bias that will contribute to economic development in these nations.

The African Development Bank and its partners formed an innovative US \$1 billion synthetic securitization of a portfolio of seasoned African Development Bank private sector loans, designed to enable the African Development Bank to increase lending in support of its mission to spur sustainable economic development and social progress. The landmark securitization instrument, a first for any multilateral development bank (MDB), offers other MDBs and investors a roadmap for innovative financing and new ways to explore the release of much-needed capital to impact financing and catalyze private capital in developing markets.

59 Corrigan, Terence, and Nicholas Lorimer. “Fake News: A New Challenge to Human Rights?” Page. South African Institute of Race Relations, May 12, 2021. <https://irr.org.za/reports/occasional-reports/fake-news-a-new-challenge-to-human-rights>.  
60 Center for Countering Digital Hate (CCDH). “The Disinformation Dozen,” n.d. <https://www.counterhate.com/disinformationdozen>.  
61 Sy, Amadou. “Exploring Media Sentiment around Africa: Positive or Negative?” Brookings (blog), August 14, 2017. <https://www.brookings.edu/blog/africa-in-focus/2017/08/14/exploring-media-sentiment-around-africa-positive-or-negative/>.  
62 Ibid.  
63 Schneidman, Witney. “Support for Governance in Africa Will Level the Playing Field for US Commercial Engagement with the Region.” Brookings (blog), January 28, 2020. <https://www.brookings.edu/blog/africa-in-focus/2020/01/28/support-for-governance-in-africa-will-level-the-playing-field-for-us-commercial-engagement-with-the-region/>.  
64 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in sub-Saharan Africa in the Era of COVID-19.” April, 2021.





Rather than relying on information from “official” or “mainstream” news sources or media outlets that once served as the established institutional gatekeepers and anchors of information, social media users on Facebook, Instagram, TikTok, Twitter, WeChat, Weibo, WhatsApp, and many other platforms are now seen as the gatekeepers and editors of mass information. In fact, the terms “official” and “mainstream” are often used as slurs to discredit long-established news sources such as AllAfrica, BBC, the *New York Times*, and/or government agencies. For many information consumers, *who* shares the information is almost as important, if not more important, than *what* the information is — thus the success of social media “influencer” marketing whereby a person can drive the decision of others online. Digital media has brought about a new and different responsibility as we are now the curators and editors of our friends’ news — a new reality that we do not yet fully understand.<sup>65</sup>

**“We are now the curators and editors of our friends’ news.”**

— Consultative Roundtable Participant

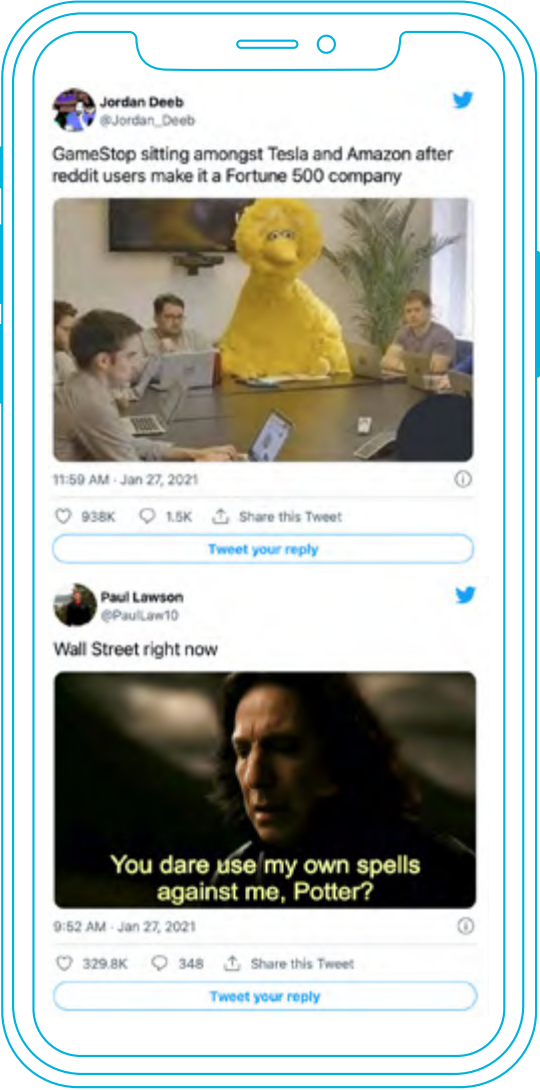
Repeatedly throughout history, people turn to conspiracy theories when faced with crises or confusion, finding it more comforting to presume a hidden cabal than to accept that random chance dictates their lives. Access to the technology to produce high-quality video or articles written to look like they come from trusted news sources, coupled with the advent of memes — which communicate an emotion or the fragment of a thought — have made it easier for anonymous and bad actors to use deep fakes or shallow fakes to alter stories, images, and video to achieve certain outcomes.

65 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.

In a recent study published by researchers at the University of Notre Dame, the proliferation of memes (or shallow fakes) was shown to be more prevalent and have greater consequences than deep fakes.<sup>66</sup> These memes, increasingly accessible and easy to create, spread narratives that reaffirm an individual’s pre-existing beliefs and can have significant impacts on collective action. For example, WallStreetBets, a subdivision of Reddit where participants discuss stock and trading options, used memes to drive behavior — leading in part to a short squeeze on the stock of GameStop, an American video game retailer.<sup>67</sup>

Identifying shallow fakes or memes requires a sophisticated approach.<sup>68</sup> The use of artificial intelligence (AI) may be a route to detect and categorize specific images or objects within a meme to better understand their range and influence. As noted in recent publications, however, these AI systems are not yet at the level of sophistication required to detect mis- or disinformation campaigns that manipulate human emotions and behavior.<sup>69</sup>

While there is progress to be made regarding the identification of fake content on the internet, civil society and governments are making strides in the detection of less discrete tactics of spreading misinformation, which remains effective in influencing human emotion and behavior. Well-produced disinformation can be especially pernicious. Multiple research studies show that viewers highly rate production quality as an important factor in determining whether to trust in the veracity of the material.<sup>70</sup> For example, in Bolivia, during the 2019 political crisis, street vendors sold DVDs with video messages opposing Evo Morales packaged and edited to appear as action movies.



66 Yankoski, Michael, Walter Scheirer, and Tim Weninger. “Meme Warfare: AI Countermeasures to Disinformation Should Focus on Popular, Not Perfect, Fakes.” *Bulletin of the Atomic Scientists* 77, no. 3 (May 4, 2021): 119–23. <https://doi.org/10.1080/00963402.2021.1912093>.

67 Ibid.

68 Theisen, William, Joel Brogan, Pamela Bilo Thomas, Daniel Moreira, Pascal Phoa, Tim Weninger, and Walter Scheirer. “Automatic Discovery of Political Meme Genres with Diverse Appearances.” *ArXiv:2001.06122 [Cs]*, September 10, 2020. <http://arxiv.org/abs/2001.06122>.

69 Yankoski, Michael, Walter Scheirer, and Tim Weninger. “Meme Warfare: AI Countermeasures to Disinformation Should Focus on Popular, Not Perfect, Fakes.” *Bulletin of the Atomic Scientists* 77, no. 3 (May 4, 2021): 119–23. <https://doi.org/10.1080/00963402.2021.1912093>.

70 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19.” February, 2021.

Case Example 5:

Spotlight on Colombia

Changing Relationship Between Media, Politics, and Business

Media ownership in Colombia is no longer concentrated with politicians or political parties, but with businesses.<sup>71</sup> For instance, two of the most influential print media in the country, the newspaper *El Tiempo* and the weekly magazine *Revista Semana*, are now owned by the most successful businessmen in Colombia. Businesspeople controlling the media in Colombia typically contribute financially to electoral campaigns, occasionally blurring the lines between an independent media and the political field. It is also worth noting that in Colombia (and several other countries in the region), factual inaccuracies or lies are subject to correction. For example, *La Silla Vacía*, an independent digital media outlet, has a “Run Lie Detector” to demystify the political discourse and ensure political players are accountable for what they say.<sup>72</sup>

Social platforms have tried using indicators that flag unverified or untrustworthy sources. For example, Twitter uproots bot accounts and has banned political advertisements.<sup>73</sup> Furthermore, Twitter is currently experimenting with a new feature that allows users to report misinformation, flagging it as “misleading.” These reported tweets will be prioritized for review based on users with the largest followings or tweets generating an unusually high level of engagement.<sup>74</sup> This test feature, currently being piloted in the U.S., South Korea, and Australia, is intended to give users a way to surface tweets that violate Twitter’s existing policies around election- and pandemic-related misinformation.

But these measures lag behind the vast quantity of information that has flooded into the space. Simply identifying these sources of mis- or disinformation is not going to eliminate the spread; it will require a much broader multi-stakeholder response to counter the influence of these actors because they employ a powerful strategy of targeting people’s pre-existing beliefs.

While public platforms like Facebook and Twitter have taken initial steps to address this issue, the results have not been entirely effective. For example, according to the *New York Times*, a quarterly Facebook report highlighting the platform’s most viewed links was never

shared with the public due to the company's fear of backlash. In that report, a copy of which was provided to the *New York Times*, the most viewed link was a news article with a headline suggesting the COVID-19 vaccine was at fault for the death of a Florida physician. The report also showed that a page for *The Epoch Times*, an anti-China newspaper that spreads conspiracy theories, was the 19th most popular page on the platform for the first three months of 2021.<sup>75</sup>

Research conducted by CCDH demonstrates that platforms fail to act on 95 percent of the COVID and vaccine misinformation reported to them.<sup>76</sup> Private messaging platforms like WhatsApp are even more challenging to monitor. These platforms, more widely used in places like sub-Saharan Africa and Latin America than Facebook or Twitter, can allow mis- and disinformation to foment and spread unchecked by outside eyes. WhatsApp currently has about 2 billion users globally, with an average time spent on the app per user of about 19.4 hours per month.<sup>77</sup> While data on the regional usage of the app can be difficult to obtain, WhatsApp has been seen as a driver of internet uptake across Africa. For example, one estimate in Zimbabwe indicated WhatsApp was responsible for about 50 percent of internet data in 2017.<sup>78</sup> Another estimate showed that WhatsApp constituted around 34 percent in both 2017 and 2018.<sup>79</sup>

Regardless, both public and private platforms find themselves outmatched and outgunned by the bad guys. Human “fact-checkers” and third-party institutions cannot keep up with the vast amount of content produced and shared by AI and bots. But bots and AI represent just one way in which bad guys spread false information, while other less intentional or malign efforts can have equally deleterious impacts.

Even if the good guys get scalable tools, they may not have access to private and direct messaging services, and even if they do, they cannot possibly keep up. Malign actors including state actors such as China, Honduras, Iran, Russia, and others deliberately leverage online platforms to spread disinformation to shape discourse and sow discontent and confusion to weaken their adversaries. According to the Edelman Trust Barometer, China saw the largest year-over-year decline in trust between 2020 to 2021, while Russia ranks as having one of the highest levels of distrust in NGOs, business, government, and media.<sup>80</sup> By failing to control the spread and quality of information in their own networks, malign actors leverage online platforms to abuse power and harm society. Information warfare has become the weapon of choice for these state actors because they can spread these narratives at very low cost and have widespread impact that requires significant resources to combat.

China’s interventionist approach in foreign policy contributes to the spread of mis- and disinformation in many parts of the world. In the wake of the centennial of the Chinese Communist Party (CCP), the CCP is discrediting attacks against the Party to protect the regime and its interests. China is using what it refers to as “wolf warrior diplomacy”<sup>81</sup> to discredit critics and expand its influence.<sup>82</sup> This clever bit of rebranding makes keyboard-warriors out of what other countries would call trolls. Through these efforts, China has tried to make its response to the pandemic and the vaccines a point of national pride and win global favor, especially in Africa and Latin America (see Case Example 6).

Moreover, Chinese media is gaining significant coverage in places like Latin America where media outlets cite Xinhua in articles because, unlike the BBC or other major global media sources, Xinhua does not require payment for sharing their information, contributing to the spread of misinformation and China’s soft power influence. This plays out in Africa as well. For example, the cheapest subscription package offered by media company StarTimes bundles Chinese and African channels, whereas access to the BBC or Al-Jazeera costs more, putting it beyond the means of many viewers.<sup>83</sup>

71 Colombia Media Ownership Monitor. “Political Affiliations,” n.d. <https://colombia.mom-rsf.org/en/findings/political-affiliations/>.  
72 La Silla Vacía. “IFCN Code of Principles,” n.d. <https://ifcncodeofprinciples.poynter.org/application/public/la-silla-vacia/99E0C26A-6214-B42A-E341-6E34D076F563>.  
73 Fortune. “Twitter Is Working to Flag False Information, but Who Should It Use as a Fulcrum of Truth?,” n.d. <https://fortune.com/2020/02/26/twitter-fake-news-fact-check/>.  
74 Hatmaker, T. (2021, August 17). Twitter asks users to flag COVID-19 and Election Misinformation. Tech Crunch. <https://techcrunch.com/2021/08/17/twitter-report-misinformation/>.  
75 Alba, D., & Mac, R. (2021, August 23). Why Facebook Shelved an Earlier Report on Popular Posts. The New York Times. [https://www.nytimes.com/2021/08/20/technology/facebook-popular-posts.html?unlocked\\_article\\_code=AAAAAAAAAAAAACEIPuonUktbfqohkQFUZAybJUNMnqBqCgvfeh7IjXL0Ky-WDC5F1\\_kRCpLF4ODWebEI28c2237TYu59B4IVZa44yP5DbQsqQhO0o5CAldNVfytpoo7rUCZrh5iRGOIn\\_GavPmXlJKJlmlOy4U6MYGDqWkbPwDZ2clYe1JhhdI6s2XcJwL6UUblmn4kjgopyQ8xyVjwCZyGVvvj3CBgYON-ObhHU6AVeSPgOEHIi3obas-RcBV0UXVHWT3p\\_4XI-4MdePr4UPqX8JxOhfKnukP6h-YhBPkPJztAQu717z0&smid=url-share](https://www.nytimes.com/2021/08/20/technology/facebook-popular-posts.html?unlocked_article_code=AAAAAAAAAAAAACEIPuonUktbfqohkQFUZAybJUNMnqBqCgvfeh7IjXL0Ky-WDC5F1_kRCpLF4ODWebEI28c2237TYu59B4IVZa44yP5DbQsqQhO0o5CAldNVfytpoo7rUCZrh5iRGOIn_GavPmXlJKJlmlOy4U6MYGDqWkbPwDZ2clYe1JhhdI6s2XcJwL6UUblmn4kjgopyQ8xyVjwCZyGVvvj3CBgYON-ObhHU6AVeSPgOEHIi3obas-RcBV0UXVHWT3p_4XI-4MdePr4UPqX8JxOhfKnukP6h-YhBPkPJztAQu717z0&smid=url-share)  
76 Center for Countering Digital Hate (CCDH). “The Disinformation Dozen,” n.d. <https://www.counterhate.com/disinformationdozen>.  
77 We Are Social. “Digital 2021: Global Overview Report.” <https://wearesocial.com/digital-2021>.  
78 Karombo, Tawanda. “Nearly Half of All Internet Traffic in Zimbabwe Goes to WhatsApp.” Quartz, October 28, 2017. <https://qz.com/africa/1114551/in-zimbabwe-whatsapp-takes-nearly-half-of-all-internet-traffic/>.  
79 Mudzingwa, Farai. “WhatsApp Is Still The Internet In Zimbabwe: Social Media Accounts For Over 35% Of Mobile Internet Data Traffic.” Techzim (blog), October 5, 2018. <https://www.techzim.co.zw/2018/10/whatsapp-is-still-the-internet-in-zimbabwe-social-media-accounts-for-over-35-of-mobile-internet-data-traffic/>.

80 Edelman. “2021 Edelman Trust Barometer,” n.d. <https://www.edelman.com/trust/2021-trust-barometer>.  
81 Brandt, Jessica, and Bret Schafer. “How China’s ‘Wolf Warrior’ Diplomats Use and Abuse Twitter.” Brookings, 28 Oct. 2020. [www.brookings.edu/techstream/how-chinas-wolf-warrior-diplomats-use-and-abuse-twitter](http://www.brookings.edu/techstream/how-chinas-wolf-warrior-diplomats-use-and-abuse-twitter).  
82 Brandt, Jessica, and Bret Schafer. “How China’s ‘Wolf Warrior’ Diplomats Use and Abuse Twitter.” Brookings, 28 Oct. 2020. [www.brookings.edu/techstream/how-chinas-wolf-warrior-diplomats-use-and-abuse-twitter](http://www.brookings.edu/techstream/how-chinas-wolf-warrior-diplomats-use-and-abuse-twitter).  
83 Lim, Louisa, and Julia Bergin. “Inside China’s Audacious Global Propaganda Campaign.” The Guardian, 12 Feb. 2019. [www.theguardian.com/news/2018/dec/07/china-plan-for-global-media-dominance-propaganda-xi-jinping](http://www.theguardian.com/news/2018/dec/07/china-plan-for-global-media-dominance-propaganda-xi-jinping).





Case Example 6:

Spotlight on Latin America

COVID-19 Vaccines and China

Sinovac and Sinopharm applied for regulatory approval from China whilst withholding information on the results of their trials; they reported 79 percent effectiveness to the Chinese government.<sup>84</sup> China, however, promoted the vaccines, broadcasting their safety and validity. The vaccines were then distributed to Brazil, where the efficacy rate was uncovered to be only 50 percent, barely above the minimum threshold set by the World Health Organization.<sup>85</sup> China has since used state-sponsored propaganda to spread misinformation about the efficacy and gone on the counter-attack to publicly question the validity of the Pfizer and Moderna vaccines, which has dangerous repercussions in undermining the overall confidence in western medicine and in health sciences at large.<sup>86</sup>

Chinese state media has taken to social media to purchase advertisements that attempt to position China as a leader in the fight against the virus and attack the U.S. and EU.<sup>87</sup> Moreover, in April 2021, the leading public health official in China made comments about China's own vaccines stating they "do not have high protection rates."<sup>88</sup> This comes after countries like Chile have among the highest vaccination rates globally with nearly 40 percent of the population fully vaccinated and 87 percent of administered doses from Chinese vaccines.<sup>89</sup>

These kinds of comments cast even more uncertainty and fear about the safety of citizens post-vaccination and create greater vaccine hesitancy, leading government officials to tighten already stringent restrictions. Furthermore, this exposes the challenges of public health officials placed in the public eye without the public relations skills needed to effectively communicate to a global audience.

84 Bowden, John. "China Admits Its Vaccines' Effectiveness Is Low." Text. The Hill, April 11, 2021. <https://thehill.com/policy/international/china/547560-china-admits-its-vaccines-effectiveness-is-low>.

85 Ker e Daniels Fernandez, Joao, and Fabiana Cambricoli. "Instituto Butantã diz que Coronavac tem 50,4% de eficácia geral; taxa é suficiente para aprovação - Saúde." Estadão, January 12, 2021. <https://saude.estadao.com.br/noticias/geral,instituto-butanta-anuncia-eficacia-geral-da-coronavac,70003578643>.

86 Nikkei Asia. "Authoritarian States Are Using COVID Vaccines to Subvert Democracy." Accessed June 7, 2021. <https://asia.nikkei.com/Opinion/Authoritarian-states-are-using-COVID-vaccines-to-subvert-democracy>; "Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19." February, 2021.

87 "EEAS SPECIAL REPORT UPDATE: Short Assessment of Narratives and Disinformation around the COVID-19/Coronavirus Pandemic (Updated 2 - 22 April) - European External Action Service." April 27, 2020. [https://eeas.europa.eu/delegations/un-geneva\\_en/77996/EEAS%20SPECIAL%20REPORT%20UPDATE:%20Short%20Assessment%20of%20Narratives%20and%20Disinformation%20around%20the%20COVID-19/Coronavirus%20Pandemic%20\(Updated%202%20E2%80%932022%20April\)](https://eeas.europa.eu/delegations/un-geneva_en/77996/EEAS%20SPECIAL%20REPORT%20UPDATE:%20Short%20Assessment%20of%20Narratives%20and%20Disinformation%20around%20the%20COVID-19/Coronavirus%20Pandemic%20(Updated%202%20E2%80%932022%20April)).

88 CNBC. "Chinese Vaccines 'don't Have Very High Protection Rates,' Top Health Official Admits," April 12, 2021. <https://www.cnbc.com/2021/04/12/china-coronavirus-vaccine-top-official-admits-low-effectiveness.html>.

89 Bartlett, John. "Chile Leads the Western Hemisphere in Vaccinations. The Coronavirus Is Still Surging." Washington Post, April 16, 2021. <https://www.washingtonpost.com/world/2021/04/16/chile-coronavirus-china-sinovac-vaccine/>.

Other state actors fuel unrest using misinformation. Whether they have a deliberate, coherent strategy or not, often the spread of mis- and disinformation is done with the intent to cause chaos and ultimately benefit their respective nation. This makes it important to understand *who* is behind the information (which is challenging when it can be distributed and spread anonymously) and *what* is the motive behind it.<sup>90</sup>

There are a myriad of state or non-state actors behind the spread of mis- and disinformation. Sponsors of

misinformation often flood the zone rather than promote a singular narrative. For example, in anti-vaccination campaigns, the same sources publish contradicting articles, simultaneously arguing that vaccines are dangerous and ineffective and that they are safe and effective. The goal is not to push one agenda but to create an atmosphere of mistrust and erode the credibility of the media, government, and other institutions (see **a Closer Look 5**).

**Conclusion:** This is now an arms race between the "bad guys" who are spreading disinformation and currently outgun the "good guys" trying to deal with ever more complex information. Governments threatened by mis- and disinformation are playing catch-up; their existing policies and capacity cannot keep up. Social media companies are assisting in this fight by disrupting sources of false information before content is shared, but the tide of war currently favors the "bad guys."

90 "Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19." February, 2021.

A Closer Look 5:

State Actors, Elites, and the Media

Censorship from governments or state actors that do not believe in or support freedom of speech and expression threatens traditional journalism. Government or ill-intentioned wealthy actors can exacerbate the challenges of misinformation because they control state media or own or run leading media companies. In Panama and Colombia, for example, large media outlets are owned by political factions or people with special interests, and governments are unable to interfere with such powerful media companies and block or filter issues of misinformation.<sup>91</sup>

Many people in societies where traditional media sources are not trustworthy lean on social media platforms for information or closed groups like WhatsApp to share information. In Venezuela, for example, the government attacked journalists and media reports while spreading its own conflicting narratives about the spread of the virus.<sup>92</sup> Governments that aim to censor citizens are finding new ways to do so as people gain internet access and interact with communities worlds apart from their own.

Exposure to global media sources can provide insight into different perspectives or opinions, and information sharing can threaten governments that seek to remain in power. In Uganda, for example, President Museveni shut down the internet entirely on election day in early 2021, and this was not the first time such measures were taken to block citizens from using social media platforms.<sup>93</sup> In the Philippines, media outlets have been subject to threats from President Duterte’s government, which has utilized Facebook to fuel violence against journalists that speak out against the government.<sup>94</sup>

In these challenging environments, citizens need reliable outside information, but access to it is threatened or cut off entirely. Social media groups have made efforts to provide accurate information to people in war-torn regions about nearby safety concerns or enabled marginalized people to convene with like-minded groups on topics of interest that would not otherwise be accessible in their communities. We must acknowledge the promise of online information and opportunities to connect, but also the harmful consequences of them if left in the wrong hands. How then can citizens still be empowered to use these platforms to their full extent and exercise their universal freedoms online while still living under constant fear of local authorities?



Trend #3: The digital world erases standards we are used to in the physical world

Yelling “fire” in a crowded theater used to define the limit of free speech and became codified through Supreme Court cases in the United States.<sup>95,96,97</sup> Each part of that claim can be individually or physically verified: Was there a fire? Did you yell “fire?” Was the theater crowded? Did you intend to incite panic? In an increasingly complex and digital world, individual and physical verification becomes difficult if not impossible. We need new heuristics and standards. The U.S. Supreme Court cases established that there were reasonable limits to the first amendment right to free speech, and the government could regulate these in the public interest. The complexity and proliferation of digital platforms means we need to update our understanding of what is and is not acceptable free speech and, perhaps more relevantly and urgently, the terms under which free speech is shared and spread. Citizens accepted past limitations; our digital world should be no different.

Evolutionary biology explains how our brains interpret the world. Our “seat of reason” in the cerebral cortex developed last. We tend to rely on the “seat of emotion” in the medulla oblongata, which evolved long before the cerebral cortex. The seat of emotion tends to control our physical and mental reactions, especially in crisis or confusion. The physical world in which we evolved

shaped our rational cerebral cortex, preparing us for an analog world while leaving us ill-equipped for a digital one. Our brains struggle to appropriately deal with or predict events that occur unbound by physical limitations, such as in mathematics or stock markets, or that occur in atypical patterns, such as pandemics with geometric or logarithmic projections, confounding us and making us susceptible to simple, inaccurate explanations and even conspiracy theories. It also makes it difficult to understand and therefore regulate the speed and scale at which digital information can be generated and distributed.

**“Explanations exist; they have existed for all time; there is always a well-known solution to every human problem—neat, plausible, and wrong.”**

— HL Menken

91 Rathbone, John Paul. “The History and Politics of Colombian Media.” El Espectador, June 5, 2013. <https://www.elespectador.com/economia/the-history-and-politics-of-colombian-media-article-426178/>.  
92 “Free Press, Fake News, and Repression during Covid-19: Venezuela and Nicaragua,” n.d. <https://www.csis.org/analysis/free-press-fake-news-and-repression-during-covid-19-venezuela-and-nicaragua>.  
93 Swails, Brent, David McKenzie, and Stephanie Busari. “Uganda Internet Shutdown Causes Polling Problems as Ex-Popstar Takes on Veteran President.” CNN, January 14, 2021. <https://www.cnn.com/2021/01/14/africa/uganda-vote-internet-shutdown-intl/index.html>.  
94 Looft, Chris. “After the Capitol: Tech and Disinfo.” First Draft, January 8, 2021. <https://firstdraftnews.org/443/latest/after-the-capitol-tech-and-disinfo/>.

95 LII / Legal Information Institute. “SCHENCK v. UNITED STATES. BAER v. SAME,,” n.d. <https://www.law.cornell.edu/supremecourt/text/249/47>.  
96 LII / Legal Information Institute. “FROHWERK v. UNITED STATES,,” n.d. <https://www.law.cornell.edu/supremecourt/text/249/204>.  
97 LII / Legal Information Institute. “DEBS v. UNITED STATES,,” n.d. <https://www.law.cornell.edu/supremecourt/text/249/211>.



The black swan theory or black swan event, popularized by Nassim Nicholas Taleb in his book, *The Black Swan: The Impact of the Highly Improbable*, describes an unpredictable or random event with serious negative consequences that may be rationalized, often with overly simple explanations, in hindsight. Our emotional and rational brains struggle to respond to these uncertainties, and we often grasp at answers. A meme popular in the early stages of the pandemic read, “If this was 500 years ago, we would have burned at least a dozen witches by now.”

Ironically, the political crises set off by the COVID-19 pandemic illustrate both how simple explanations often fail us and the degree of human progress in the last century. People rationalized past plagues and pandemics as “acts of God” not subject to human control or intervention. In the current pandemic, people assume governments can and should do something about it. The simple explanation (God is punishing us) has given way to the more complex answer (public health authorities and pharmaceutical companies can do something about it), and yet we still struggle to come to terms with the math of infection rates and the math of information and misinformation distribution.

If someone yells “fire” in a crowded theater, not only can we verify the facts, but the damage is also contained to the people in that theater. If someone spreads false information online, that damage theoretically knows

no bounds. While our lives remain subject to random chance (e.g., pandemics, severe weather, earthquakes), our institutions can also more effectively respond (e.g., public health measures, emergency preparedness, rapid rebuilding) than ever before. Yet those very same responses are now subject not just to physical challenges (can we respond in time, move equipment into place) but also to digital challenges (has online disinformation eroded the trust of people in those communities in the responding organizations) and the damage dis- and misinformation can do online has no geographic boundary to contain it.

When it comes to combating mis- and disinformation, if everyone is responsible, no one is responsible. Tech platforms remain rightly cautious about assuming responsibility for curating the accuracy of information or for determining the intent in spreading it, for fear of stepping into a morass of censorship. To help sidestep the censorship debacle while still making progress, some roundtable participants suggested taking aim at what is truly different in the tech platforms versus earlier forms of mass communication, namely the unfettered access, speed, and scale they provide. Essentially, individuals have a right to their opinions but not to the unfettered, fast, and broad distribution of those opinions. Regulating the underlying technology that powers these platforms, e.g., the algorithms that determine what people see and how information gets distributed, may offer a policy alternative for regulators and tech platform terms of use.

**Conclusion:** Societies need new standards for evaluating the limits and intent of free speech and updated legal and regulatory frameworks for overseeing the technologies that enable the distribution of misinformation.

## Trend #4: Tech-enabled scale and speed make regulating the flow of information increasingly challenging

Laws, regulations, and corporate policies have not kept pace with technology nor with the scale and sophistication of how these technologies are used both for good and malign purposes. The rate of information sharing and the number of data points available grows by the minute and travels fast across borders, making it very difficult to regulate or control. As mentioned previously, a 2018 study by MIT found that it takes true stories about six times as long to reach 1,500 people as it does for false stories to reach the same number of people.<sup>98</sup> Why? Because the “bad guys” have tools (AI, bots, etc.) they can use at a speed and scale that the “good guys” and ordinary individuals cannot possibly counter on their own.

There are not enough analysts in the world to enable governments, media companies, social media platforms, and their trusted partners to watchdog and/or fact-check every claim made online. This presents an extremely dangerous scenario: who decides what is “fact?” Who are the third parties verifying facts and what biases are influencing their fact-checking? Where is the line between authoritative and authoritarianism? Who is the arbiter of truth?<sup>99</sup> Governments are already taking action and COVID-19 has given them an excuse to impose new laws and regulations. Since 2019, more than “62 laws have been proposed, amended, or implemented to tackle misinformation.”<sup>100</sup>

Journalism and mass media can be a part of the solution, but they currently operate under a broken business model. Most media establishments are under-resourced and underfunded, resulting in less on-the-ground journalism to counter false narratives and negative bias. For journalists and the media to re-establish trust among the public, it will require multi-stakeholder approaches that utilize third-party fact-checking resources and trusted, reputable influencers to convey messages and combat disinformation. Often the medium is the message. The “good guys” need to have a presence on and insights into the platforms and media that people use and trust, e.g., emerging media platforms, gaming systems, and virtual reality.

One example of institutionalizing fact-checking as a way to counter mis- and disinformation can be found in Taiwan. Taiwan's Digital Minister, Audrey Tang, established the Taiwan FactCheck Center as a way to help counter the emergence and spread of accounts and messages that were producing memes with mis- and disinformation that become viral.<sup>101</sup> The FactCheck Center includes “Meme Engineering teams that partner with national comedians to clarify online rumors to the public in an expedient, humorous, and effective way.”<sup>102</sup> This “humor over rumor” strategy is acknowledged as a critical method in helping curb the spread of COVID-19 in Taiwan, and this approach can be adapted when countering disinformation beyond the pandemic.”<sup>103,104</sup>

98 Dizikes, Peter. “Study: On Twitter, False News Travels Faster than True Stories.” MIT News | Massachusetts Institute of Technology, March 8, 2018. <https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308>.

99 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.

100 Yadav, Kamya, Ulas Erdogdu, Samikshya Siwakoti, Jacob Shapiro, and Alicia Wanless. “Countries Have More than 100 Laws on the Books to Combat Misinformation. How Well Do They Work?” Bulletin of the Atomic Scientists (blog), May 13, 2021. <https://thebulletin.org/premium/2021-05/countries-have-more-than-100-laws-on-the-books-to-combat-misinformation-how-well-do-they-work/>.

101 “台灣事實查核中心 | Taiwan FactCheck Center.” Accessed August 22, 2021. <https://tfc-taiwan.org.tw/>.

102 Tu, Chang-Ching. “Lessons from Taiwan's Experience with COVID-19.” Atlantic Council (blog), April 7, 2020. <https://www.atlanticcouncil.org/blogs/new-atlanticist/lessons-from-taiwans-experience-with-covid-19/>.

103 Bendix, Aria. “A Coronavirus ‘spokesdog’ in Taiwan Delivers Crucial Information to the Public — Part of a ‘Humor over Rumor’ Strategy That Helped Stop the Country’s Outbreak.” Business Insider, June 11, 2020. <https://www.businessinsider.com/taiwan-coronavirus-strategy-digital-campaign-dog-mascot-2020-6>.

104 CEPPS, and USAID. “Strategic Communication and Voter Education to Mitigate Disinformation Threats.” Countering Disinformation, n.d. <https://counteringdisinformation.org/index.php/topics/embs/1-strategic-communication-and-voter-education-mitigate-disinformation-threats>.



These types of fact-checking centers help to establish a trusted, reputable source in the community and they are emerging around the world where mis- and disinformation has become a prominent issue. Turkey has a civil society organization, Doğruluk Payı, which verifies information in news sources.<sup>105</sup> The organization has a set of principles on their website that make their process evident to readers. This set of principles includes commitments to transparency in resources, impartiality and fairness, financial structure, transparency of resource methods, and reliability of correct analyses.

To effectively cut through misinformation, people need to look for non-traditional methods of identifying trusted messengers to deliver content or review content received by potentially untrusted sources (see Case Example 7).

For instance, many people may trust an individual, such as their local pastor, although they have lost faith in the larger institution they represent, in this case, the church. These trusted individuals represent powerful voices that can rise above the cacophony of competing and conflicting messages.

In many cases, organizations have tapped “micro-influencers” — social media influencers with a few thousand followers — to deliver verified information. These actors are trusted by their communities and have proved more effective at times than even the mainstream media, which can be associated with the perceived “corrupt” political class.

Case Example 7:

Spotlight on Latin America

Community Leaders and Journalists Empower Citizens to Counter Mis- and Disinformation Around Elections

**Countering Misinformation via WhatsApp in Mexico:** Companies are making attempts at scale to regulate the flow of mis- and disinformation, but local communities with well-regarded leaders and trusted journalists can take smaller steps to stop the spread of misinformation. In Mexico, local community leaders and journalists are stepping up to the challenge by taking advantage of their favorable public regard. Local journalists use this credibility to both monitor and teach community members how to fact-check and verify information themselves. Some communities embed fact-checkers in wide-reaching WhatsApp groups to access these private platforms and identify sources of misinformation and attempt to counter it there.

Other trusted media groups rely on citizens to bring forward potential misinformation from WhatsApp or other closed networks. People send WhatsApp messages to journalists to verify whether information is true or not. Journalists are then able to create more personal relationships with consumers. Journalists can also share their processes for verifying information to both increase transparency and empower citizens with the tools they need to be better fact-checkers themselves.

These interactions are like mini-media literacy courses for citizens, helping them understand how third-party fact-checkers or journalists discern information. Journalists are trying to teach citizens how to discern the truth because they cannot assume citizens are able to determine the difference between sources in the same way that journalists are trained to do.

The other component of understanding misinformation is the emotional response it attempts to elicit from consumers. Many “bad guys” aim to emotionally manipulate viewers and journalists struggle to meet the challenge at scale because false news spreads faster than facts. Examples of smaller scale fact-checking and enabling citizens to be the ones that flag questionable content are being utilized across media platforms and around the world.

**Ecuador Election Information-Sharing:** To help create cooperative approaches and support information literacy, U.S.-based International Republican Institute (IRI) works to promote ethical information sharing and prevent the spread of disinformation. IRI supports Ecuador’s election oversight body, CNE, to support their communication practices to make reliable information accessible and to work with CSOs to improve information integrity through initiatives that help educate voters on COVID-19 protocols. IRI worked with CNE on a protocol for political communication during a crisis, which helped communicate electoral results in the second round of presidential elections, providing voters with confidence. IRI also helped in the discussion of disinformation and its relationship with electoral campaign expenses in the digital environment. After a series of international seminars, CNE compiled many of the regional best practices and issued regulations, including tighter controls on campaign expenses (including digital ads) in December 2020.

IRI also promoted and helped “Voces por la Democracia,” a civil society consortium, provide information on topics relevant to CNE, such as the process of counting and validating votes in polling stations. IRI also worked with a consortium of more than 15 youth organizations, “Alzando las Voces,” which promoted informed voting and youth participation through an innovative information campaign. Further, IRI organized Fiestas de Debate, where more than 600 young people organized and divided into forums, followed up, and discussed what was happening in the first- and second-round presidential debates.

105 “Doğruluk Payı,” n.d. <https://www.dogrulukpayi.com/>.



Companies like Facebook and Twitter have deployed strategies to counter misinformation on a large scale and are working with governments around the world to better understand and anticipate the variety of threats. While it might not be the complete solution to meet the ever-growing amount of false information shared online, it is a start to understanding the ways in which “bad guys” create and distribute false information on these platforms. The question many companies and governments are facing now is who regulates the flow of information? As technology changes, the regulators must change as well and update oversight measures.

A recent example in Kenya exemplifies the challenge associated with identifying a single party responsible for regulating information and platforms as stakeholders and circumstances are ever-evolving. Mobile phones in Kenya had always been the preserve of the Ministry of Telecommunications until Safaricom popularized “mobile money,” a service that enables mobile phone users to send money from one user to another. The Central Bank stepped in, stating that this feature resided in their purview. As a result of the plethora of different goods and services that overlap and are traded digitally, it became increasingly challenging to identify who was responsible for regulation and safeguarding consumers.

Sending money via mobile phone became a multi-billion-dollar business in Kenya. When the Central Bank weighed the positives and negatives of the opportunity, such as growing the adoption of banking services among populations that have not traditionally had access to such resources, financial regulators characterized Safaricom as a friendly organization, as it provided a service that banks could not. Ultimately, the Central Bank decided to regulate as “issues emerged,” emphasizing the complex nature of identifying the party responsible for regulation. Mobile money illustrates both the up- and downsides of

technology and the challenge of effective governance and regulation. Do too little, and harm can result. Do too much, and innovation stops and technologies fail to live up to their potential to improve lives.

When it comes to combating the spread of misinformation, an arms race has ensued and neither social media companies nor regulators have kept pace. Social media companies can utilize both human labor to fact-check and counter narratives, as well as machine learning to identify and eliminate spam or fake accounts at the source.<sup>106</sup> As new types of bots become more sophisticated and the messaging becomes more difficult to track or detect, companies will need to keep identifying the loopholes that misinformation spreaders use to access and spread information on their platforms.

At the same time, the emergence of new platforms and mediums for spreading information have gained traction, fueled by frustrations with the larger social media companies. These new platforms promise not to limit free speech or expression but aim to adhere to community guidelines and policies. As new platforms emerge with immature systems for identifying and removing false or misleading content, could this exacerbate the inability to keep pace as the “bad guys” shift to new platforms?

Clearly, developing new regulatory and policy approaches for the technologies and platforms that facilitate the propagation of misinformation and disinformation is a highly complex issue and perhaps the most considerable challenge we face in this battle. The internet and most of these platforms have a global reach, and we need to take a similarly global approach in addressing this most pressing issue; although helpful, bilateral cooperation between nations has proved insufficient and should move toward a more concerted multilateral approach.

**Conclusion:** Keeping up with the “bad guys” will take a mix of technology, policy, and behavior change.



**Trend #5:** There is a continuing inability to address basic human psychological needs in the tech platforms and regulatory frameworks

**“Social media is like an untested human experiment that has been unleashed on the population.”**

— Consultative Roundtable Participant

Our brains are built for an analog world with instincts, autonomic responses, and cognitive coping mechanisms ill-suited for a digital world. Social platforms intentionally take advantage of these features and neither the platforms nor laws have adjusted to reduce the harm they can cause. As a result, people go to social media for affirmation of their own beliefs and find themselves caught in their own echo chambers.<sup>107</sup> Users do not often go to social media for facts or to seek the truth.

Social media has quietly and effectively become a form of hyper-aggressive tribalism that has had a worsening impact on nations and international cooperation.<sup>108</sup>

It begs the question of whether this manipulation into hyper-aggressive tribalism is a feature or a bug. Social media platforms track individual behavior and are engineered to have feedback loops that promote addictive use of the platform. Unfortunately, negative content is “stickier” than positive content, which reinforces greater use of the platform and greater sharing of negative content. Content is tailored with algorithms that intentionally aim to increase engagement and are largely based on individual exposure to and interaction with different content. Algorithms are not objective — they are biased and reflect only the person who designed them and the purpose for which they were designed.<sup>109</sup>

<sup>106</sup> Working to Stop Misinformation and False News | Facebook Media. “Working to Stop Misinformation and False News,” n.d. <https://www.facebook.com/formedia/blog/working-to-stop-misinformation-and-false-news>.

<sup>107</sup> GCFGlobal. “Digital Media Literacy: How Filter Bubbles Isolate You,” n.d. <https://edu.gcfglobal.org/en/digital-media-literacy/how-filter-bubbles-isolate-you/1/>.

<sup>108</sup> “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19,” December, 2020.

<sup>109</sup> Ibid.



Spreading information through social media is like an untested human experiment that has been unleashed on the population. There are several prominent issues: how manipulable information is, how attention is spent online, and the reality that information consumers and platform users are impulsive and inattentive. After conducting a study on the impact of votes such as a “like” or “retweet,” researchers at the University of Notre Dame found that many social media users will share content based on only partial information, such as a title, without actually clicking on a link.<sup>110</sup> If we are, as pointed out in Trend #2, our brother’s and sister’s curator, when we share information without taking time to understand the content, we fail in that function.<sup>111</sup>

While social media companies have started taking greater responsibility, as currently constructed, their platforms play to the worst of the human psyche and legislators and regulators lag in their ability to provide guidance and oversight. Left alone, social media companies will continue to prioritize profit over the public good or service they purport to provide.<sup>112</sup> As with any market, however, regulators can intervene to introduce different incentives to influence the behavior of information consumers, providers, and distributors. Just as tech platforms have leveraged human behavioral science to increase their user base, they have the opportunity to apply that same science to mitigate the spread of mis- and disinformation. Exploring this potential connection has not yet received significant traction, overburdening the individual user with

responsibility for making judgments on the accuracy of information. Platforms need to strike a balance between meeting their business needs and answering to the public and its concerns without stifling freedoms of expression. The development of technology should not be hindered, but rules and guidelines can help create incentives that will help these companies better protect users and make the internet a safer place to be.<sup>113</sup> According to Oxford University, one way for social media companies to address the concerns around misinformation is to ensure advertising is transparent, starting with political campaigns.<sup>114</sup> Transparency between political parties or supporters and tech companies can help ensure appropriate use of social media communication from official sources.<sup>115</sup> People want to — and should — know who backs a post or advertisement, especially given recent experience and scandals that demonstrate the online threats to our democratic processes.

As one example, consulting firm Cambridge Analytica collected and utilized Facebook user data to influence political elections in 2016. While this may have started as a legitimate use of data, in the end, Cambridge Analytica misused data and violated Facebook’s terms of service.<sup>116</sup> Some commentators have stated that Bloomberg Philanthropies’ aim of reducing the proliferation of vaping products had unintended consequences, causing many users to return to smoking traditional cigarettes.<sup>117</sup>

**Conclusion:** Social media companies, regulators, and legislators can and should create rules and regulations to increase transparency and help protect democratic processes.

110 Glenski, Maria, Corey Pennycuff, and Tim Weninger. “Consumers and Curators: Browsing and Voting Patterns on Reddit.” *IEEE Transactions on Computational Social Systems* 4, no. 4 (December 2017): 196–206. <https://doi.org/10.1109/TCSS.2017.2742242>.

111 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.

112 Chang, Welton, Doowan Lee, and Peter W. Singer. “Three Ways to Clean Up the Toxic Minefields of Social Media.” *Defense One*, September 23, 2020. <https://www.defenseone.com/ideas/2020/09/three-ways-clean-toxic-minefields-social-media/168715/>.

113 FP Virtual Dialogue: How to Stop Fake News, 2021. <https://foreignpolicy.com/events/fp-how-to-stop-fake-news-northwestern-university-buffett-institute-misinformation-tech-journalism/>.

114 Spinks, Sara. “Online Politics Needs to Be Cleaned up – but Not Just by Facebook and Twitter Say Oxford Academics.” *Oxford Internet Institute*, November 18, 2019. <https://www.oii.ox.ac.uk/blog/online-politics-needs-to-be-cleaned-up-but-not-just-by-facebook-and-twitter-say-oxford-academics/>.

115 Ibid.

116 Zialcita, P. (2019, October 30). Facebook Pays \$643,000 Fine For Role In Cambridge Analytica Scandal. *NPR*. <https://www.npr.org/2019/10/30/774749376/facebook-pays-643-000-fine-for-role-in-cambridge-analytica-scandal>

117 The Chronicle of Philanthropy. “Bloomberg’s Millions Funded an Effective Campaign Against Vaping. Could It Do More Harm Than Good?,” March 23, 2021. <https://www.philanthropy.com/article/bloombergs-millions-funded-an-effective-campaign-against-vaping-could-it-do-more-harm-than-good>.



Case Example 8:

**Spotlight on the European Union**  
*Grappling with Big Tech Regulations and Censorship*

The manner in which European countries have approached mis- and disinformation can be characterized between “pre-COVID-19 times” and “COVID-19 times.” Before COVID-19, the EU had not put resources toward monitoring fake news originating within the EU or from countries with the exception of Russia.<sup>118</sup> EU governments pay careful attention to avoid censorship-like models of monitoring and removing content on social media — particularly as Eastern Europe’s historical experience with censorship continues to loom large. The information police that held power in Eastern European countries during the Cold War demonstrates how censorship can be abused to incite fear and maintain control. As a result, the EU has under-resourced government efforts to reduce the spread of false stories.

With the onset of COVID-19, however, the EU has taken a more aggressive approach to tackling mis- and disinformation. While the EU is still mindful of upholding the democratic values of free speech, the European Commission published a series of guidelines which clearly distinguish between illegal content, as defined by law, and content that is harmful but not illegal. For example, Illegal hate speech as a result of disinformation about a particular ethnic or religious group being blamed for the spread of COVID-19, as well as COVID-19 related racist and xenophobia content, is subject to the rules of removal by platforms and authorities under criminal laws of the Member States.<sup>119</sup> The EU has long promoted self-regulation for tech companies, suggesting they invest in their own fact-checking while also flooding the space with factual information to outweigh the non-factual. They have now taken this one step further, requiring major tech platforms to sign the Code of Practice on Disinformation, which requires platforms to regularly report back to the European Commission on their actions to limit disinformation.<sup>120,121</sup> The Code of Practice on Disinformation will become an instrument within the Digital Services Act framework to further incentivize participation.<sup>122</sup>

118 Perrone, Alessio, and Darren Loucaides. “‘Spreading like a Virus’: Inside the EU’s Struggle to Debunk Covid Lies.” *The Guardian*, August 17, 2021. <http://www.theguardian.com/world/2021/aug/17/spreading-like-a-virus-inside-the-eus-struggle-to-debunk-covid-lies>.

119 Commission Recommendation of 1 March 2018 on measures to effectively tackle illegal content online (C(2018) 1177 final).

120 European Commission. “Code of Practice on Disinformation,” n.d. <https://digital-strategy.ec.europa.eu/en/policies/code-practice-disinformation>.

121 FP Virtual Dialogue: How to Stop Fake News, 2021. <https://foreignpolicy.com/events/fp-how-to-stop-fake-news-northwestern-university-buffett-institute-misinformation-tech-journalism/>.

122 “The Digital Services Act: Ensuring a Safe and Accountable Online.” *European Commission - European Commission*, 12 Oct. 2020. [ec.europa.eu/info/strategy/priorities-2019-2024/](https://ec.europa.eu/info/strategy/priorities-2019-2024/)



## 3

## Recommendations

Through our consultative roundtables, interviews, and research, several key recommendations have emerged. The following set of recommendations aim to address two key questions:

**How might we reduce misinformation and disinformation in the modern era?**

**How might we restore trust?**

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**Recommendation #1:** Build up autonomic response to disinformation and misinformation through awareness and nudging

Awareness and education coupled with tech-enabled nudges can encourage people to have more unconscious and automatic responses to misinformation. In nearly all the consultative roundtables, experts recommended some form of media literacy education. But what would this actually look like? News or media literacy is defined as “the ability to determine what is credible and what is not, to identify different types of information, and to use the standards of authoritative, fact-based journalism as an aspirational measure in determining what to trust.”<sup>123</sup>

While a growing consensus agrees that the ability to read is no longer enough, we need practical ways of arming ourselves with the ability to distinguish fact from fiction, especially as bad guys increasingly deploy more sophisticated information manipulation tactics. At the University of Notre Dame, they are creating media literacy guidelines in digestible formats (e.g., short commercials) that aim to help citizens in low- and middle-income countries recognize misinformation

and disinformation and learn how to combat it.<sup>124</sup> We also need to acknowledge that for some audiences the medium is the message and education or expertise becomes almost a disqualifier, a form of elitism and therefore a reason to discount legitimate sources of information.<sup>125</sup>

We recommend recasting media literacy in the same way we think about health and physical education in schools as providing the foundations for a healthy lifestyle. Students do not need to come out as experts in nutrition, rope climbing, or dodgeball. Rather, we want them to develop healthy habits — an almost autonomic response wherein they pause before serving a plate without vegetables on it and to incorporate exercise into their weekly routines. We should also not limit teaching media literacy to young people; many adults have shown an inability to discern between fact and fiction online and exercise the poor online habits that allow misinformation to spread.

europa-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment\_en.

<sup>123</sup> Ramos, Liz. “The U.S. Election Underscores the Need for Teaching News Literacy in Our Schools.” EdSurge, November 7, 2020. <https://www.edsurge.com/news/2020-11-07-the-u-s-election-underscores-the-need-for-teaching-news-literacy-in-our-schools>.

<sup>124</sup> Pulte Institute for Global Development. “Advancing Media Literacy in Developing Countries,” n.d. <https://pulte.nd.edu/projects/advancing-media-literacy-in-developing-countries/>.

<sup>125</sup> “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19.” December, 2020.





Similarly, media literacy should *not* rely on only cognitive response, but rather instill habits and nudges that would cause people to automatically:

- **Look for or evaluate the source when receiving new information**
- **Consider motivations of the author/originator**
- **Hesitate (either by choice or through a technology-enabled nudge) before sharing information they haven't actually read**

Twitter and other social media platforms have already started experimenting with “pause” notifications that ask users if they really want to share an article they haven’t read. For the public, the responsibility lies in prioritizing a broader media diet, acknowledging the bias of different outlets, while taking responsibility for serving as “our brother’s and sister’s editor,” and pausing before sharing information on social networks. Governments and individual users should encourage and, in some cases, require tech platforms to deploy similar nudges to the Twitter pause button on wider scales.

Nextdoor, the neighborhood app that allows neighbors to discuss and share local news, will soon go public, intended to trade under the stock symbol KIND as

an effort to shed a reputation for users that spread spiteful messages. To combat this trend, Nextdoor has used a positivity bot since 2019, generating “kindness reminders” if a user drafts a hateful message. In April of 2021, it added anti-racism notifications in the U.S. after cruel messages spread during the Black Lives Matter movement.<sup>126</sup> Deploying a version of a “positivity bot” should be a priority for tech platforms, used as a deliberate tool to effectively combat mis- and disinformation.

Simply ensuring an educated public is only half the battle. Both the public and mass media need to prioritize verified information over speed of reporting, a greater challenge in places with a digital divide. We must also acknowledge that connectivity and literacy go together. Issues of limited or no broadband and internet access, coupled with an onslaught of conflicting social media messages, have created a bottleneck effect that has led to what the United Nations has coined an “infodemic” (see **Case Example 9**).<sup>127</sup> With more limited access to broadband, citizens in regions like sub-Saharan Africa typically receive information much later than those in North America, Europe, or Japan. Compounded by an inability to fact-check this information via Google search, even the more digitally literate consumers of information often cannot verify information as it arrives.

<sup>126</sup> Gapper, John. “Nextdoor’s Neighbours Are Not Kind to Strangers.” *Subscribe to Read | Financial Times*, Financial Times, 9 July 2021, [www.ft.com/content/a8d0ac24-8271-4dcb-87a3-6608ac4b548a](https://www.ft.com/content/a8d0ac24-8271-4dcb-87a3-6608ac4b548a).  
<sup>127</sup> The Africa Infodemic Response Alliance (AIRA), brings together 13 international and regional organizations, together with fact-checking groups which have expertise in data and behavioural science, epidemiology, research, digital health and communications. The alliance formed as a UN response to identifying the communications crises as a secondary impact of the COVID-19 pandemic to further mitigate the growing digital divide between Africa and the rest of the world. See The Africa Infodemic Response Alliance: <https://www.afro.who.int/aira>.



Case Example 9:

Spotlight on Africa

*CDC/Health Partners Create Resources for Verified Information*

Among the challenges of the COVID-19 pandemic is what health authorities have labeled an “infodemic.” The Africa Centers for Disease Control (Africa CDC) and strategy and media consultancy Gatefield worked with the Global Health Advocacy Incubator to develop a toolkit to provide verified information for journalists. The toolkit includes the latest COVID-19 reporting, as well as additional data, best practices, and resources:

- **Africa CDC** provides regular reports with data on new cases, deaths, recoveries and transmission types.<sup>128</sup> The information is gathered from public health institutes in member states.
- The **World Health Organization (WHO) Africa Dashboard** has Africa-related data, as well as updated situation reports on the COVID-19 outbreak on the continent.
- **United Nations Africa Knowledge Hub** for COVID-19 is an interactive repository of interventions, engagements, and resources on the pandemic in Africa developed by the UN Development System in Africa.<sup>129</sup> It hosts information and data from sources including WHO, regional UN agencies, and the ministries of health of African governments.
- Mobile survey platform **Geopoll** has conducted remote surveys amongst citizens in sub-Saharan Africa to examine COVID-19 awareness levels and primary information sources, as well as knowledge of prevention measures. Access to the reports is free and includes data such as sources of information most popular among citizens, and citizens’ rating of local media’s coverage of the pandemic.

This recommendation acknowledges that while updating the regulatory frameworks and guides that inform companies about how to deal with mis- and disinformation is important, there are other means by which we should individually accept responsibility for and respond to exploitations by bad actors. By raising awareness of media biases and educating people on how to better evaluate new information and identify scientific facts, we can begin to reduce mis- and disinformation.

When people apply this lens to new information that they encounter, users on social media platforms, for example, will take a more critical view of the source or title of an article. In effect, we would see a reduction in the spread of false or misleading information because it stops with individual users. But doing so means embedding this understanding at a deeper level within our behaviors and platforms.

<sup>128</sup> “Home – Africa CDC,” n.d. <https://africacdc.org/>.  
<sup>129</sup> “Home | Africa UN Knowledge Hub for COVID-19,” n.d. <https://knowledge.uneca.org/covid19/>.





## Recommendation #2: Provide allies and “good guys” with new and updated guidelines, resources, tools, and legal/policy frameworks to reduce the spread of misinformation and disinformation

Both governments and social media platforms need guidelines, resources, and other support to evaluate and manage risk and ultimately reduce the spread of misinformation. Legislatures and courts still don’t know how to deal with social media platforms or the information that spreads on them. It took decades to build the legal framework governing traditional print and broadcast news. At the same time, we cannot rely on a crime and punishment mindset alone. We need more effective laws that create accountability and a level playing field where competition can create reinforcing social norms that encourage sharing verified information and discourage sharing unverified information.

The lack of legal frameworks and social norms can become dangerous especially as it relates to public health, whether it is a long-running health problem like smoking, or fast-moving crises like COVID-19. When new or unregulated products reach the market with no accountability for how information is spread or interpreted, it impacts people’s health, as was the case of misinformation around e-cigarettes and vaping products as well as vaccines.<sup>130</sup> The International Republican Institute recently supported the government of Colombia by creating a crisis communication manual and training government officials and authorities on topics such as how to manage a misinformation crisis. This led to a sharing of best practices in other countries across Latin America.

An army of self-proclaimed, non-verified disinformation experts has emerged in recent years. This is further complicated by the reality that the growth of computational propaganda has skyrocketed. Computational propaganda is the use of algorithms, automation, and human curation to purposefully distribute misleading information over social media networks.<sup>131</sup>

The misinformation industry focuses on cleaning up content, curating, and sanitizing the media ecosystem, rather than empowering end users. We need smart tools that anyone can use — at scale — to counter the

massive amount of computational propaganda. Using top-down approaches (e.g., hiring analysts to scrutinize an extensive, growing volume of quantitative data points) no longer makes practical sense. At the same time, we must acknowledge the risks of putting these tools in the hands of governments or private individuals and organizations. Individuals may not actually use them if they require greater conscious effort and private organizations may lack accountability and even democratic governments may overuse them, risking a lurch toward authoritarianism.

The complexity of addressing mis- and disinformation requires a strategy that addresses multiple facets of the problem: nudges for individuals to behave as better curators combined with speedy, scalable tools for use by individuals and democratically governed actors who can wield them for the public good. Companies can monitor content from people that have an extensive reach or network, such as celebrities or government officials, but on a broad scale, companies need to deploy bots and AI to help enforce policies or standards. Social media should come with built-in nudges and free or low-cost tools that individual “good guys” can use to help in the fight to combat misinformation, similar to the way that Wikipedia users monitor content on that platform but at a scale and speed that matches the bad guys. Companies and governments should then publish the standards and procedures for how these tools work and get deployed, subjecting them to independent review and governance.

***“We need smart tools that anyone can use at scale to counter the massive amount of computational propaganda.”***

***— Consultative Roundtable Participant***

<sup>130</sup> The Chronicle of Philanthropy. “Bloomberg’s Millions Funded an Effective Campaign Against Vaping. Could It Do More Harm Than Good?,” March 23, 2021. <https://www.philanthropy.com/article/bloombergs-millions-funded-an-effective-campaign-against-vaping-could-it-do-more-harm-than-good>.

<sup>131</sup> Computational Propaganda Worldwide: Executive Summary. (2017, August 20). Phil Howard. <https://philhoward.org/computational-propaganda-worldwide-executive-summary/>

# Recommendation #3: Update the limits of the distribution of free speech

Free speech has always had limits. No one was entitled to yell “fire” in a crowded theater nor was the *New York Times* required to publish every missive submitted to it. Social media platforms have intentionally avoided taking responsibility for what goes on their platforms because monitoring it poses truly tough legal, ethical, and logistical dilemmas. Much attention has focused on how these platforms have policed the speech of prominent people and even de-platformed some. But monitoring prominent people is the least tricky of these challenges because the platforms probably have the authority, standards, and resources to do it. Monitoring the general public, anonymous posters, and closed groups poses even bigger challenges.

But doing nothing is no longer an option. We must acknowledge that while individuals have the right to their opinion and freedom of speech, tech platforms have a responsibility for monitoring the distribution and amplification of those opinions through tactics such as regulating algorithms. If a post violates the community standards or guidelines that platforms have, it is within the platforms’ jurisdiction to remove that content or user. It is also in the power and purview of the platform to stop the automatic distribution and sharing of that content.

To balance the potential biases of platforms in their policing practices, however, the standards that govern their decisions to remove content need to be transparent. Facebook, for example, is already initiating these practices such as when they provide information about the third-party fact-checkers they use to verify information.<sup>132</sup> The company has also taken basic steps to archive political ads on a global basis and make them searchable, an approach that could lay the groundwork for other types of reviewable/auditable information that the public or government can access.<sup>133</sup> Platforms can contribute to restoring trust of users by being transparent and proactive.

Given their broad scale and widespread influence, tech platforms have a responsibility beyond their business models to contribute to the stability of society and democracy, similar to what we expect from operators of critical infrastructure, such as transportation. Over time, both markets and regulators have created incentives for airline and airplane manufacturers to uphold safety

standards as their first priority, with profitability coming second. This provides a model for both formal (e.g., regulatory) and informal (e.g., social norms) approaches to changing corporate behavior.

We now need standards for the digital era and institutions to enforce them. Identifying what these standards should be goes beyond the scope of this report, but we do recommend the formation of national and international standards and ideally making use of existing authorities (e.g., national governments, the European Union, and the UN system), while retaining an ability to be elastic and constantly evolving in the same way the information does.

Further, such standards need to consider the emergence of major “influencers” who now wield as much power (if not more) among their constituencies as public officials or media, but are currently not governed by the same set of norms. It will be essential to convene these platforms and new influencers alongside traditional players to develop voluntary measures that could possibly evolve into regulatory or legislative standards. Creating a clear understanding of free speech in the digital era is not impossible, but it is one that will require the concerted involvement of government, the private sector, and civil society to ensure adequate buy-in across all concerned parties.

While we recommend updating our understanding of what free speech means in the digital era with an eye toward limiting the spread of mis- and disinformation, we must also work to ensure a free flow of ideas and information. This requires restraint on the part of regulators, commentators, and others to prevent an idea that one might disagree with from being labeled “misinformation” or “disinformation” simply because one does not agree with it. While there are many problems with digital platforms, they have provided outlets and opportunities to many authors and commentators who might not have been able to publish in more elite publications. This “democratization” of the ideas industry — done right and with some formal and informal guidelines — could yield dividends over time.

# Recommendation #4: Invest in longitudinal studies on policy effectiveness

Individual countries and oversight bodies will likely try different policy alternatives for dealing with mis- and disinformation on the internet and on social media platforms. The European Union will and is already exploring ways in which they will set up legal and regulatory frameworks.

As these different approaches play out, we recommend investing in rigorous academic evaluations of their effectiveness over time. This will contribute to ensuring organizations and governments can adopt the most effective laws, regulations, and policies and work toward creating policy harmony.

# Recommendation #5: Focus on the fact production and distribution ecosystem

Facebook’s approach to misinformation includes removing or dealing with content that can cause physical harm or create real threats to users (e.g., COVID-19 vaccines or Myanmar and the Rohingya crisis), identifying content that falls below the threat level, relying on credible sources and trusted partner input to help make decisions, and investing in journalism to create a fact-checking ecosystem.<sup>134</sup> At the same time, we need to carefully define “harm” or determine trusted sources when adding warning labels and setting up verified accounts.

Alongside the global platforms, local journalism and CSOs can play a key role in supporting fact-checking, media literacy, and the spreading of accurate information at a more local level. Efforts to thwart the spread of misinformation at the local level can be useful in communities where organizations have credibility and are rooted in the fabric of the local ecosystem. Local journalists and CSOs can become the conveyors of truth or correct misinformation.

Although there has been a significant emphasis placed on fact-checking misinformation and disinformation in traditional media, on social media platforms, and in closed networks — and these efforts should continue — it is essential that we focus more heavily on producing and distributing fact-based information in the first instance. Research has shown that once individuals read, hear, or see false information, it is impossible to erase its influence. Under this “continued influence

effect,” people will continue to rely on the misinformation to which they have been exposed, even after retractions or corrections.<sup>135</sup> Further, many correction attempts repeat the false information in the process of debunking it, heightening the visibility of the myth, and possibly spreading it to people who might otherwise have never seen it.<sup>136</sup> To avoid this, correction strategies should focus on emphasizing what’s true without repeating the details of the false information.

To make information more useful, it needs to be interoperable, usable by multiple institutions regardless of origin. In addition, information needs to be verifiable by independent sources so that more people can rely upon it. Governments can play a role in ensuring that information is gathered according to commonly agreed-upon standards and establish processes for verification and oversight to reduce misinformation.

In addition to efforts by government and civil society organizations, the scientific community has a role in setting a standard for producing reputable, evidence-based information that is then communicated through these channels to the public. According to the Edelman Trust Barometer, survey respondents indicated that scientists were the most trusted leaders in the community and ranked higher than government leaders, religious leaders, journalists, business leaders, and people in the community.<sup>137</sup> Indeed, in some societies, particularly those that are authoritarian or semi-authoritarian, the government may not be viewed

132 Facebook’s Third-Party Fact-Checking Program. “Facebook’s Third-Party Fact-Checking Program,” n.d. <https://www.facebook.com/journalismproject/programs/third-party-fact-checking>.  
133 Facebook Ad Library, [https://www.facebook.com/ads/library/?active\\_status=all&ad\\_type=political\\_and\\_issue\\_ads&country=US&media\\_type=all](https://www.facebook.com/ads/library/?active_status=all&ad_type=political_and_issue_ads&country=US&media_type=all)

134 <https://about.fb.com/news/2021/02/an-update-on-myanmar/>  
135 Lewandowsky, S., Ecker, U. K. H., Seifert, C., Schwarz, N., & Cook, J. (2012). “Misinformation and its correction: Continued influence and successful debiasing.” *Psychological Science in the Public Interest*, 13, 106-131. — DOI 10.1177/1529100612451018  
136 Schwarz, N., Newman, E.J., & Leach, W. (2016). “Making the truth stick and the myths fade: Lessons from cognitive psychology.” *Behavioral Science & Policy*, 2(1), 85-95.  
137 Edelman. “2021 Edelman Trust Barometer,” n.d. <https://www.edelman.com/trust/2021-trust-barometer>.



as a trusted institution, particularly if it leverages disinformation as a means to maintain control.

Science can be the strongest antidote to misinformation and mistrust, particularly when varying scientific perspectives reach consensus. For example, members of the scientific community have an opportunity to increase the visibility of the rigorous peer review process for scientific findings before reports are publicly disseminated. Upholding processes like this sets a higher standard for accountability. We must also simultaneously recognize the need for scientific pluralism — the ability for scientists to disagree and explore alternative explanations for natural phenomena — while not letting it become an excuse for public policy inaction. While scientists may carry on a vigorous debate about how blackholes work (a matter of unsettled science) obscure disagreements on how viruses work (a largely settled science) should not prevent effective public policy on handwashing or mask wearing in the midst of a global pandemic. Nor should the fact that a few scientists still disagree on the human origins of climate change (also a matter of largely settled science) prevent multilateral efforts to prevent its acceleration or adapt to its impacts.

We must also depoliticize facts and science and move away from “data vs. dogma.” When people only believe the science that supports their own opinion, innovation suffers tremendously. For example, nuclear energy is rarely considered in EU discussions of alternative energy, which are based more in public opinion than scientific research. Science must be objectively tested and reviewed in an open forum and should not provide an avenue to a narrow-minded view. Industries such as nuclear energy, oil, and tobacco face ideologically driven resistance, including from national and international authorities, e.g., the UN and the World Health Organization. Legislators, interest groups, and organizations often drive discussions on misinformation

while using skewed narratives for their own interests. These narratives must be addressed by news media, private companies, national governments, and international institutions.

Scientific evidence is paramount to increasing public trust; however, if politicized, science can quickly become distorted. If scientific knowledge is a key element in guarding against mis- and disinformation, how do we preserve information grounded in science from politicization? Denmark’s approach to managing school during COVID-19 and its potential impact on students illustrates the power of presenting scientific evidence in a non-politicized way.<sup>138</sup> Schools organized meetings between teachers, parents, and scientists, which allowed for open dialogue of different perspectives. While scientists disagreed on some points, there was collective agreement on foundational scientific facts regarding the virus. As demonstrated here, individuals are more likely to trust scientific knowledge if they feel they have an opportunity to engage meaningfully in the process, hearing the same foundational knowledge from multiple sources. In fact, people will trust a process they consider fair even if the outcome doesn’t favor them.

Media outlet leadership needs to be convinced to invest in long-term efforts that will help combat mis- and disinformation.<sup>139</sup> Community leaders can use their platforms to correct or restore trust with people who have fallen victim to mis- and disinformation. We need to leverage trusted agents (local messengers) and trusted institutions (e.g., religious organizations) within the community to generate trust, build rapport, and create common ground. It is essential to recognize that no single entity will be able to eradicate misinformation and disinformation alone; successfully overcoming this formidable challenge requires a global, multi-stakeholder approach, uniting individuals, civil society, business, and government behind this common purpose.

# Tools You Can Use to Combat Misinformation

- The Johns Hopkins Coronavirus Map tracks COVID-19 cases by country and region, including total confirmed and active cases.<sup>140</sup> The university has also created a resource center with useful information from medical experts and analysis about the spread and impact of COVID-19.
- Users can now tag tweets as “misleading.”<sup>141</sup> *\*This is a pilot currently underway in the US, Australia, and South Korea.*<sup>142</sup> *It may not be accessible in all countries.*
- Pew Research Center has created a cable news fact sheet that analyzes patterns of the major networks and news channels after significant growth in viewers since the start of the pandemic.<sup>143</sup>
- The Consortium for Elections and Political Process Strengthening (CEPPS) launched The Countering Disinformation Guide in April 2021, which was created for civil society, governments, practitioners, and others working to counter the threat and spread of disinformation globally. The guide features organizations and projects around the world and their methods and interventions to reduce and/or prevent the spread of disinformation.<sup>144</sup>
- Notre Dame de Namur University has developed guides for fake news, one of which provides tips for analyzing news sources including fact checking and avoiding fake news.<sup>145</sup> On the site, they also share a media bias chart developed by Ad Fontes Media to help users “determine the reliability of information.”<sup>146</sup>

138 Vegas, E. (2020, July 6). Reopening the World: Reopening schools—Insights from Denmark and Finland. Brookings.<https://www.brookings.edu/blog/education-plus-development/2020/07/06/reopening-the-world-reopening-schools-insights-from-denmark-and-finland/>.  
139 “Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19.” February, 2021.

140 “Coronavirus COVID-19 (2019-NCov),” n.d. <https://gisanddata.maps.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6>.  
141 Hatmaker, T. (2021, August 17). Twitter asks users to flag COVID-19 and Election Misinformation. Tech Crunch. <https://techcrunch.com/2021/08/17/twitter-report-misinformation/>.  
142 Dang, Sheila. “Twitter Tests Allowing Users to Flag Misleading Tweets.” Reuters, August 17, 2021, sec. Publishing. <https://www.reuters.com/article/twitter-moderation-idUSL1N2PL011>.  
143 Pew Research Center. “Cable News Fact Sheet.” Pew Research Center’s Journalism Project, July 13, 2021. <https://www.pewresearch.org/journalism/fact-sheet/cable-news/>.  
144 CEPPS. “Countering Disinformation,” n.d. <https://www.counteringdisinformation.org/>.  
145 Kim, Grace. “Fake News: Analyzing News Sources.” Notre Dame de Namur University, n.d. <https://library.ndnu.edu/fakenews/identifying>.  
146 Kim, Grace. “Fake News: The Media Bias Chart.” Notre Dame de Namur University, n.d. <https://library.ndnu.edu/fakenews/mediabias>.

# Bibliography

"Afrobarometer," n.d. <https://afrobarometer.org/>.

TerraPower. "About Us," n.d. <https://www.terrapower.com/about/>.

Pulte Institute for Global Development. "Advancing Media Literacy in Developing Countries," n.d. <https://pulte.nd.edu/projects/advancing-media-literacy-in-developing-countries/>.

"Analysis | Many Africans Distrust Their Governments. How Will That Affect Their Coronavirus Response?" *Washington Post*. Accessed June 7, 2021. <https://www.washingtonpost.com/politics/2020/05/01/many-africans-distrust-their-governments-how-will-that-affect-their-coronavirus-response/>.

Nikkei Asia. "Authoritarian States Are Using COVID Vaccines to Subvert Democracy." Accessed June 7, 2021. <https://asia.nikkei.com/Opinion/Authoritarian-states-are-using-COVID-vaccines-to-subvert-democracy>.

Bartlett, John. "Chile Leads the Western Hemisphere in Vaccinations. The Coronavirus Is Still Surging." *Washington Post*, April 16, 2021. <https://www.washingtonpost.com/world/2021/04/16/chile-coronavirus-china-sinovac-vaccine/>.

The Chronicle of Philanthropy. "Bloomberg's Millions Funded an Effective Campaign Against Vaping. Could It Do More Harm Than Good?," March 23, 2021. <https://www.philanthropy.com/article/bloombergs-millions-funded-an-effective-campaign-against-vaping-could-it-do-more-harm-than-good>.

The Seattle Times. "Boeing Burns through Cash, Suffers Sixth Straight Quarterly Loss," April 28, 2021. <https://www.seattletimes.com/business/boeing-aerospace/hit-both-by-pandemic-and-quality-problems-boeing-reports-more-losses/>.

Bendix, Aria. "A Coronavirus 'Spokesdog' in Taiwan Delivers Crucial Information to the Public — Part of a 'Humor over Rumor' Strategy That Helped Stop the Country's Outbreak." *Business Insider*, June 11, 2020. <https://www.businessinsider.com/taiwan-coronavirus-strategy-digital-campaign-dog-mascot-2020-6>.

Bowden, John. "China Admits Its Vaccines' Effectiveness Is Low." *Text*. The Hill, April 11, 2021. <https://thehill.com/policy/international/china/547560-china-admits-its-vaccines-effectiveness-is-low>.

Brady, W., McLoughlin, K., Doan, T., & Crockett, M. (2021, August 13). *How social learning amplifies moral outrage expression in online social networks*. *ScienceAdvances*. <https://www.science.org/doi/10.1126/sciadv.abe5641>

Brown, Matthew, and Elizabeth Weise. "Fact Check: Bill Gates Is Not Planning to Microchip the World through a COVID-19 Vaccine." *USA TODAY*, June 12, 2020. <https://www.usatoday.com/story/news/factcheck/2020/06/12/fact-check-bill-gates-isnt-planning-implant-microchips-via-vaccines/3171405001/>.

Busari, Stephanie, David McKenzie, and Brent Swails. "Uganda Internet Shutdown Causes Polling Problems as Ex-Popstar Takes on Veteran President." *CNN*, January 14, 2021. <https://www.cnn.com/2021/01/14/africa/uganda-vote-internet-shutdown-intl/index.html>.

Busby, M. (2018, May 8). Social media copies gambling methods "to create psychological cravings." *The Guardian*.

Campbell, John. "Russian Disinformation Popularizes Sputnik V Vaccine in Africa." *Council on Foreign Relations*, December 10, 2020. <https://www.cfr.org/blog/russian-disinformation-popularizes-sputnik-v-vaccine-africa>.

Center for Countering Digital Hate (CCDH). "The Disinformation Dozen," n.d. <https://www.counterhate.com/disinformationdozen>.

CEPPS, and USAID. "Strategic Communication and Voter Education to Mitigate Disinformation Threats." *Countering Disinformation*, n.d. <https://counteringdisinformation.org/index.php/topics/embs/1-strategic-communication-and-voter-education-mitigate-disinformation-threats>.

CEPPS. "Countering Disinformation," n.d. <https://www.counteringdisinformation.org/>.

Chang, Welton, Doowan Lee, and Peter W. Singer. "Three Ways to Clean Up the Toxic Minefields of Social Media." *Defense One*, September 23, 2020. <https://www.defenseone.com/ideas/2020/09/three-ways-clean-toxic-minefields-social-media/168715/>.

Commonwealth of Massachusetts Department of Public Health. "Ban on E-Cigarettes and Vaping Products: Frequently Asked Questions" October, 2019. <https://www.mass.gov/files/documents/2019/10/08/Vaping-Ban-FAQ-10-3-19.pdf>.

"Coronavirus COVID-19 (2019-NCov)," n.d. <https://gisanddata.maps.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6>.

"Coronavirus: Security Forces Kill More Nigerians than Covid-19." *BBC News*, April 16, 2020, sec. Africa. <https://www.bbc.com/news/world-africa-52317196>.

Corrigan, Terence, and Nicholas Lorimer. "Fake News: A New Challenge to Human Rights?" Page. *South African Institute of Race Relations*, May 12, 2021. <https://irr.org.za/reports/occasional-reports/fake-news-a-new-challenge-to-human-rights>.

CNBC. "Chinese Vaccines 'don't Have Very High Protection Rates,' Top Health Official Admits," April 12, 2021. <https://www.cnn.com/2021/04/12/china-coronavirus-vaccine-top-official-admits-low-effectiveness.html>.

Daly, Kyle, and Ashley Gold. "Tech's Misinformation Fight: Winning the Battle, Not the War." *Axios*, November 5, 2020. <https://www.axios.com/tech-misinformation-fight-2020-election-labeling-posts-48ccacb6-3ef0-4550-93d3-228caf2a5969.html>.

Dang, Sheila. "Twitter Tests Allowing Users to Flag Misleading Tweets." *Reuters*, August 17, 2021, sec. Publishing. <https://www.reuters.com/article/twitter-moderation-idUSL1N2PL011>.

Dearden, Lizzie. "Isis Using Kittens and Honey Bees in Bid to Soften Image in Dabiq Propaganda Magazine." *The Independent*, August 2, 2016. <https://www.independent.co.uk/news/world/middle-east/isis-kittens-honey-bees-dabiq-propaganda-recruits-photo-soften-image-terror-a7168586.html>.

Dizikes, Peter. "Study: On Twitter, False News Travels Faster than True Stories." *MIT News | Massachusetts Institute of Technology*, March 8, 2018. <https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308>.

"Doğruluk Payı," n.d. <https://www.dogrulukpayi.com/>.

Edelman. "2021 Edelman Trust Barometer," n.d. <https://www.edelman.com/trust/2021-trust-barometer>.

GCFGlobal. "Digital Media Literacy: How Filter Bubbles Isolate You," n.d. <https://edu.gcfglobal.org/en/digital-media-literacy/how-filter-bubbles-isolate-you/1/>.

"EEAS SPECIAL REPORT UPDATE: Short Assessment of Narratives and Disinformation around the COVID-19/ Coronavirus Pandemic (Updated 2 – 22 April) - European External Action Service," April 27, 2020. [https://eeas.europa.eu/delegations/un-geneva\\_en/77996/EEAS%20SPECIAL%20REPORT%20UPDATE:%20Short%20Assessment%20of%20Narratives%20and%20Disinformation%20around%20the%20COVID-19/Coronavirus%20Pandemic%20\(Updated%202%20%E2%80%93%2022%20April\)](https://eeas.europa.eu/delegations/un-geneva_en/77996/EEAS%20SPECIAL%20REPORT%20UPDATE:%20Short%20Assessment%20of%20Narratives%20and%20Disinformation%20around%20the%20COVID-19/Coronavirus%20Pandemic%20(Updated%202%20%E2%80%93%2022%20April)).

European Commission. "Code of Practice on Disinformation," n.d. <https://digital-strategy.ec.europa.eu/en/policies/code-practice-disinformation>.

Facebook's Third-Party Fact-Checking Program. "Facebook's Third-Party Fact-Checking Program," n.d. <https://www.facebook.com/journalismproject/programs/third-party-fact-checking>.

*FP Virtual Dialogue: How to Stop Fake News*, 2021. <https://foreignpolicy.com/events/fp-how-to-stop-fake-news-northwestern-university-buffett-institute-misinformation-tech-journalism/>.

"Free Press, Fake News, and Repression during Covid-19: Venezuela and Nicaragua," n.d. <https://www.csis.org/analysis/free-press-fake-news-and-repression-during-covid-19-venezuela-and-nicaragua>.



Fritz, Martin. "Coronavirus: How Japan Keeps COVID-19 Under Control | DW | 25.03.2020." DW.COM, March 25, 2020. <https://www.dw.com/en/coronavirus-how-japan-keeps-covid-19-under-control/a-52907069>.

Glenski, Maria, Corey Pennycuff, and Tim Weninger. "Consumers and Curators: Browsing and Voting Patterns on Reddit." *IEEE Transactions on Computational Social Systems* 4, no. 4 (December 2017): 196–206. <https://doi.org/10.1109/TCSS.2017.2742242>.

Harford, Tim. "What Magic Teaches Us About Misinformation." *Financial Times*, May 6, 2021. <https://www.ft.com/content/5cea69f0-7d44-424e-a121-78a21564ca35>.

Health, CDC's Office on Smoking and. "Smoking and Tobacco Use; Electronic Cigarettes." Centers for Disease Control and Prevention, November 27, 2020. [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html).

Henley, Jon. "How Finland Starts Its Fight against Fake News in Primary Schools." *The Guardian*, January 29, 2020. <http://www.theguardian.com/world/2020/jan/28/fact-from-fiction-finlands-new-lessons-in-combating-fake-news>.

"Home | Africa UN Knowledge Hub for COVID-19," n.d. <https://knowledge.uneca.org/covid19/>.

"Home – Africa CDC," n.d. <https://africacdc.org/>.

Karombo, Tawanda. "Nearly Half of All Internet Traffic in Zimbabwe Goes to WhatsApp." *Quartz*, October 28, 2017. <https://qz.com/africa/1114551/in-zimbabwe-whatsapp-takes-nearly-half-of-all-internet-traffic/>.

Ker e Daniels Fernandez, Joao, and Fabiana Cambricoli. "Instituto Butantã diz que Coronavac tem 50,4% de eficácia geral; taxa é suficiente para aprovação - Saúde." *Estadão*, January 12, 2021. <https://saude.estadao.com.br/noticias/geral,instituto-butanta-anuncia-eficacia-geral-da-coronavac,70003578643>.

Kim, Grace. "Fake News: Analyzing News Sources." Notre Dame de Namur University, n.d. <https://library.ndnu.edu/fakenews/identifying>.

Kim, Grace. "Fake News: The Media Bias Chart." Notre Dame de Namur University, n.d. <https://library.ndnu.edu/fakenews/mediabias>.

Kirk, Katherine. "How Russia Sows Confusion in the U.S. Vaccine Debate – Foreign Policy." *Foreign Policy*, April 9, 2019. <https://foreignpolicy.com/2019/04/09/in-the-united-states-russian-trolls-are-peddling-measles-disinformation-on-twitter/>.

La Silla Vacía. "IFCN Code of Principles," n.d. <https://ifcncodeofprinciples.poynter.org/application/public/la-silla-vacia/99E0C26A-6214-B42A-E341-6E34D076F563>.

Lee, Doowan, Andrew Dowse, and Sascha-Dominik Dov Bachmann. "COVID Information Warfare and the Future of Great Power Competition." *The Fletcher Forum of World Affairs* 44:2 (2020). [https://www.academia.edu/44384848/COVID\\_Information\\_Warfare\\_and\\_the\\_Future\\_of\\_Great\\_Power\\_Competition](https://www.academia.edu/44384848/COVID_Information_Warfare_and_the_Future_of_Great_Power_Competition).

LeVan, Kristina. "COVID Questions: Is Vaccine Approved? What to Expect Afterward?" *University of Wisconsin-Madison News*, February 11, 2021. <https://news.wisc.edu/covid-questions-approved-vaccines-what-to-expect-after-vaccine/>.

Lewandowsky, Stephan, Ullrich K. H. Ecker, Colleen M. Seifert, Norbert Schwarz, and John Cook. "Misinformation and Its Correction: Continued Influence and Successful Debiasing." *Psychological Science in the Public Interest* 13, no. 3 (December 1, 2012): 106–31. <https://doi.org/10.1177/1529100612451018>.

Looft, Chris. "After the Capitol: Tech and Disinfo." *First Draft*, January 8, 2021. <https://firstdraftnews.org/443/latest/after-the-capitol-tech-and-disinfo/>.

Mao, Jiaqi Zhang, Justice Nonvignon, and Wenhui. "How Well Is Ghana—with One of the Best Testing Capacities in Africa—Responding to COVID-19?" *Brookings* (blog), July 28, 2020. <https://www.brookings.edu/blog/future-development/2020/07/28/how-well-is-ghana-with-one-of-the-best-testing-capacities-in-africa-responding-to-covid-19/>.

Mudzingwa, Farai. "WhatsApp Is Still The Internet In Zimbabwe: Social Media Accounts For Over 35% Of Mobile Internet Data Traffic." *Techzim* (blog), October 5, 2018. <https://www.techzim.co.zw/2018/10/whatsapp-is-still-the-internet-in-zimbabwe-social-media-accounts-for-over-35-of-mobile-internet-data-traffic/>.

Okereke, Melody, Nelson Ashinedu Ukor, Lilian Muthoni Ngaruiya, Chikwe Mwansa, Samar Mohammed Alhaj, Isaac Olushola Ogunkola, Hadi Mohammed Jaber, Mashkur Abdulhamid Isa, Aniekan Ekpenyong, and Don Eliseo Lucero-Prisno. "COVID-19 Misinformation and Infodemic in Rural Africa." *The American Journal of Tropical Medicine and Hygiene* 104, no. 2 (February 3, 2021): 453–56. <https://doi.org/10.4269/ajtmh.20-1488>.

Pennycook, Gordon, Ziv Epstein, Mohsen Mosleh, Antonio A. Arechar, Dean Eckles, and David G. Rand. "Shifting Attention to Accuracy Can Reduce Misinformation Online." *Nature* 592, no. 7855 (April 2021): 590–95. <https://doi.org/10.1038/s41586-021-03344-2>.

Perrone, Alessio, and Darren Loucaides. "'Spreading like a Virus': Inside the EU's Struggle to Debunk Covid Lies." *The Guardian*, August 17, 2021. <http://www.theguardian.com/world/2021/aug/17/spreading-like-a-virus-inside-the-eus-struggle-to-debunk-covid-lies>.

Pew Research Center. "Cable News Fact Sheet." Pew Research Center's Journalism Project, July 13, 2021. <https://www.pewresearch.org/journalism/fact-sheet/cable-news/>.

Colombia Media Ownership Monitor. "Political Affiliations," n.d. <https://colombia.mom-rsf.org/en/findings/political-affiliations/>.

"Product Health Impacts," n.d. <https://www.pmi.com/integrated-report-2019/innovating-for-better-products/product-health-impacts>.

Ramos, Liz. "The U.S. Election Underscores the Need for Teaching News Literacy in Our Schools." *EdSurge*, November 7, 2020. <https://www.edsurge.com/news/2020-11-07-the-u-s-election-underscores-the-need-for-teaching-news-literacy-in-our-schools>.

Rathbone, John Paul. "The History and Politics of Colombian Media." *El Espectador*, June 5, 2013. <https://www.elespectador.com/economia/the-history-and-politics-of-colombian-media-article-426178/>.

Rauch, J. (2019, July 10). *Twitter Needs a Pause Button*. The Atlantic. <https://www.theatlantic.com/magazine/archive/2019/08/twitter-pause-button/592762/>

Research, Center for Biologics Evaluation and. "Emergency Use Authorization for Vaccines Explained." *FDA*, December 14, 2020. <https://www.fda.gov/vaccines-blood-biologics/vaccines/emergency-use-authorization-vaccines-explained>.

Schneidman, Witney. "Support for Governance in Africa Will Level the Playing Field for US Commercial Engagement with the Region." *Brookings* (blog), January 28, 2020. <https://www.brookings.edu/blog/africa-in-focus/2020/01/28/support-for-governance-in-africa-will-level-the-playing-field-for-us-commercial-engagement-with-the-region/>.

France 24. "Security Forces Use Violent Tactics to Enforce Africa's Coronavirus Shutdowns," April 1, 2020. <https://www.france24.com/en/20200401-security-forces-use-violent-tactics-to-enforce-africa-s-coronavirus-shutdowns>.

Sandhu, Parwinder. "Next Pandemic Will Get Attention: Video Clip of 'Smirking' Bill and Melinda Gates Draws Ire Online," July 10, 2020. <https://www.ibtimes.sg/next-pandemic-will-get-attention-video-clip-smirking-bill-melinda-gates-draws-ire-online-48228>.

Snowdon, Christopher. "The Impact Of COP9 On Vapers." *Institute of Economic Affairs, Property Rights Alliance*, Summer 2021, 15. <https://www.propertyrightsalliance.org/wp-content/uploads/Impact-Of-COP9-On-Vapers.pdf>.

Spinks, Sara. "Online Politics Needs to Be Cleaned up – but Not Just by Facebook and Twitter Say Oxford Academics." *Oxford Internet Institute*, November 18, 2019. <https://www.oii.ox.ac.uk/blog/online-politics-needs-to-be-cleaned-up-but-not-just-by-facebook-and-twitter-say-oxford-academics/>.

Strauss, Valerie. "Analysis | Word of the Year: Misinformation. Here's Why." *Washington Post*, December 10, 2018. <https://www.washingtonpost.com/education/2018/12/10/word-year-misinformation-heres-why/>.

Sy, Amadou. "Exploring Media Sentiment around Africa: Positive or Negative?" *Brookings* (blog), August 14, 2017. <https://www.brookings.edu/blog/africa-in-focus/2017/08/14/exploring-media-sentiment-around-africa-positive-or-negative/>.

"台灣事實查核中心 | Taiwan FactCheck Center." Accessed August 22, 2021. <https://tfc-taiwan.org.tw/>.

Theisen, William, Joel Brogan, Pamela Bilo Thomas, Daniel Moreira, Pascal Phoa, Tim Weninger, and Walter Scheirer. "Automatic Discovery of Political Meme Genres with Diverse Appearances." *ArXiv:2001.06122 [Cs]*, September 10, 2020. <http://arxiv.org/abs/2001.06122>.

Tu, Chang-Ching. "Lessons from Taiwan's Experience with COVID-19." *Atlantic Council* (blog), April 7, 2020. <https://www.atlanticcouncil.org/blogs/new-atlanticist/lessons-from-taiwans-experience-with-covid-19/>.

NPR.org. "These Are the Standards of Our Journalism.," n.d. <https://www.npr.org/ethics>.

Fortune. "Twitter Is Working to Flag False Information, but Who Should It Use as a Fulcrum of Truth?," n.d. <https://fortune.com/2020/02/26/twitter-fake-news-fact-check/>.

Human Rights Watch. "Uganda: Respect Rights in COVID-19 Response," April 2, 2020. <https://www.hrw.org/news/2020/04/02/uganda-respect-rights-covid-19-response>.

Vinograd, Samantha. "Opinion: With Vaccine Rollout Comes Onslaught of Disinformation." CNN, December 14, 2020. <https://www.cnn.com/2020/12/14/opinions/russian-misinformation-trump-covid-vaccine-vinograd/index.html>.

"Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in the U.S. in the Era of COVID-19." December, 2020.

"Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in Latin America in the Era of COVID-19." February, 2021.

"Virtual Consultative Roundtable on Information Literacy in Japan in the Era of COVID-19." February, 2021.

"Virtual Consultative Roundtable on Information Literacy: The Threat of Mis/Disinformation in sub-Saharan Africa in the Era of COVID-19." April, 2021.

We Are Social. "Digital 2021: Global Overview Report." <https://wearesocial.com/digital-2021>.

Wladawsky-Berger, Irving. "Will the Digital Revolution Deliver for the World's Poor?" Accessed June 7, 2021. <https://www.brookings.edu/wp-content/uploads/2016/07/WladawskyBergerWilltheDigitalRevoltionDeliver.pdf>.

Wladawsky-Berger, Irving. "Will the Digital Revolution Deliver for the World's Poor?," n.d., 6.

Working to Stop Misinformation and False News | Facebook Media. "Working to Stop Misinformation and False News," n.d. <https://www.facebook.com/formedia/blog/working-to-stop-misinformation-and-false-news>.

Yadav, Kamya, Ulas Erdogan, Samikshya Siwakoti, Jacob Shapiro, and Alicia Wanless. "Countries Have More than 100 Laws on the Books to Combat Misinformation. How Well Do They Work?" *Bulletin of the Atomic Scientists* (blog), May 13, 2021. <https://thebulletin.org/premium/2021-05/countries-have-more-than-100-laws-on-the-books-to-combat-misinformation-how-well-do-they-work/>.

Yankoski, Michael, Walter Scheirer, and Tim Weninger. "Meme Warfare: AI Countermeasures to Disinformation Should Focus on Popular, Not Perfect, Fakes." *Bulletin of the Atomic Scientists* 77, no. 3 (May 4, 2021): 119–23. <https://doi.org/10.1080/00963402.2021.1912093>.



