Forum:	Third General Assembly
Issue:	Regarding the rise of scientific and medicinal distrust and misinformation
Student Officer:	Lily Zhou and Shian Joo
Position:	Assistant president

Introduction

Many may know the infamous Marie Antoinette's famous quote. "Your majesty, they have no bread," Antoinette was allegedly told. But Marie Antoinette replied with not a hint of hesitation or concern: "If they have no bread, let them eat cake." This quote, in correction, this misquote, was what ultimately cost her life. The misquote contributed to the princess's frivolous disregard for the starving people, which provoked the urge of the people of the French Revolution to bring down the monarchy. The significant presence and dissemination of misinformation have not changed throughout history.

A 2018 study of 126,000 rumors and fake news found that false information spreads 6 times faster than truthful news. It isn't entirely clear why this is the reality. Sometimes misinformation is derived from disinformation, which draws the attention of individuals with alarming titles or it may look entirely like the truth, but simply a bit misleading. Misinformation sometimes may just be rumors and jokes, with relatively less harm. However, when it comes to misinformation that can sway the life of an individual or various communities, it becomes a national crisis.

Misinformation is often confused with disinformation, assumed to be interchangeable by many. However, it is essential to understand that misinformation is "false information," while disinformation is "false information" with the intent to harm or misguide others. Many individuals accept misinformation that is mistaken as a fact, and in many cases, indeed, disinformation is mistaken as misinformation as they are disseminated through multiple individuals. Disinformation can be mistaken as misinformation by those who are unable to detect it and most disinformation cannot be proven to be disinformation until the disseminator of the information admits to their intentions. The vague line between misinformation and disinformation accumulates to the distrust that results from false information.

The phenomenon of the rise of distrust and misinformation in science and healthcare has become evermore evident after the COVID-19 pandemic, where misinformation and disinformation overwhelmed all countries and communities, targeting all individuals, particularly marginalized communities, with detrimental repercussions to health literacy and making good decisions. Along with the rise of social media, social media platforms have become a battlefield between truth and falsehood, in which not a single individual can 100% identify what is true or what is utterly absurd. In a drastically developing

society, basic necessities and rights must be protected from deleterious information that may determine an individual's survival

Definition of Key Terms

Medicinal

The word "medicinal" comes from the word medicine, which originates from the Latin root, *medicina*: "the healing art, a remedy, or medicine." It can also be associated with healthcare, pharmaceutics, healthcare information, and new medical inventions.

Misinformation

Lewandowsky et. al defines misinformation as "any piece of information that is initially processed as valid but is subsequently retracted or corrected." Misinformation is often derived from distrust and doubt, in which the sender and/or receiver are victims of distorted information, which they fail to criticize or correct. Some researchers claim that "falsehood" is insufficient to define misinformation. There is information that is objectively true, but they are completely misleading. "Clickbait" is a common example of misleading information; it is arguably true, not entirely true, but also not false.

Disinformation

Misinformation is false and inaccurate information, in other words, misinformation is getting the facts wrong without intent to harm. On the other hand, disinformation is false information intended and designed to mislead others; disinformation is "misinformation" that is intentionally spread.

Health literacy

Health literacy is the ability to find, understand, and use reliable and safe health information to make informed decisions about one's health. Health literacy is pivotal to individuals' and communities' accessibility to proper health care. Scientific and health distrust and misinformation can lower health literacy, particularly for marginalized communities, by making it challenging to identify credible sources, leading to poor decisions that result in negative health outcomes.

Dissemination

Dissemination is the act of spreading and sharing information. Dissemination can occur with misinformation, disinformation, facts, rumors, conspiracy theories, or any piece of idea or message. Dissemination can be directed towards any particular audience directly and indirectly; this means that information can be disseminated to multiple people, indirectly, or from just one person, directly.

.

Background

Proliferation of misinformation online

As technology advances and social media platforms become increasingly more integrated into the global communication network, so has the dissemination of misinformation accelerated, and the volume of such content proliferated. According to Statista, 67.5 percent of the global population are internet users, as of October 2024. The pervasive use of online networks has in several ways facilitated the prevalence of scientific and medicinal distrust and misinformation. For one thing, online anonymity has to an extent allowed users to be protected from consequences of online violations—with behaviors such as spreading damaging rumors—and enabled those with unethical intentions, or who are misled from the outset and lacking expertise, to recklessly publish inaccurate medicinal information on the internet, resulting in the rise of pseudoscience. Upon the occurrence of such incidents, negative societal impacts often escalate to a damaging scale as proactive and controversial posts tend to appeal to people's curiosity and desire for novelty. The widespread attention that such misleading information receives may then lead to the prevalence of conspiracy theories and enhancement of people's cognitive biases, provoking resistance against science and medical measures associated with public health, such as vaccination. Additionally, most algorithms of social media platforms such as X (or Twitter), Instagram, and TikTok tend to allow more social traffic for contents that generate more interactions—including re-posts, likes, and comments—which often is a trait of content containing controversial pseudoscience. This has further facilitated the rise of scientific and medicinal misinformation.

Reasons behind distrust and misinformation

Political influence

Scientific and medicinal distrust and misinformation can sometimes arise from broader anti-government sentiments and political polarization. Most people in the modern era believe that scientific research and medicinal innovations are beneficial to society. Approximated international survey results reveal that, in every 10 global citizens, 7 individuals have trust in scientists and express an interest in learning more about health and science (U.S. News & World Report). Yet, sentiments of distrust still emerge regardless of having such consensus, as sources of scientific findings may be perceived as essentially lacking reliability and credibility. Specifically, it is often the case that science and public health sectors are associated with governmental investments: an example of a direct governmental investment may be seen in the funding of health service research that aligns with the Ministry of Health (MOH) priorities, by the Health Services Research Grant (HSRG) in Singapore. When preliminary factors of governmental intervention, political polarization, and the politicization of scientific and medicinal findings co-exist, consequences may be that the public experiences a diminished ability to discern credible sources and is equipped with

only a fragmented understanding of relevant topics. As a result, individuals are more likely to accept and support voices that reinforce their pre-existing beliefs or align with their political standing, and potentially view scientific consensus as unreliable or biased—resulting in controversies and disengagement.

Scientific and medicinal data transparency

It is indicated by research that the credibility of scientific findings may be enhanced through increased transparency in data sharing, as it enables the independent verification of results. Commitments to handling data transparently and ethically can significantly enhance stakeholders' mutual trust and help build public trust in scientific practices. Conversely, when there's a lack of transparency in the scientific and medical field, where decisions cannot stand independent of the available data, distrust emerges and exacerbates. This is because, in the absence of authoritative evidence-based reports, it is easy for scientific and medicinal findings to be perceived as deliberately manipulated, through methods such as selective reporting and exaggeration, for political or commercial agendas. There are several factors that contribute to the lack of transparency in the scientific and medicinal fields—a major one being confidentiality concerns. Sometimes, researchers are restrained from sharing their data owing to ethical and legal obligations from non-disclosure agreements that restrict such behaviors. These restrictions often arise from considerations regarding the excessive amount of time and resources that were invested and potential harm to self-interests—such as reduced academic or commercial benefits. Other concerns that lead to the withholding of data include violation of privacy, potential misuse, intellectual property rights, etc (ResearchGate).

Scientific literacy

Low degrees of scientific literacy and training can also make people more susceptible to scientific and medicinal misinformation and hence facilitate its dissemination. This is because individuals who lack scientific literacy may find it difficult to correctly discern false information and interpret, or understand, scientific concepts, especially in the presence of complex technical terminologies—making them more likely to accept misleading narratives at face value.

Major Parties Involved

United States of America (USA)

The United States of America is often found in the center of information, science, and medicine. Countries, particularly, More Economically Developed Countries (MEDCs) and institutions within powerful countries that hold significant authority are modeled to have accurate information. As a result,

many countries in association with the USA also have their information stirred towards what the USA presents. However, many Americans, in fact, have significant distrust of multiple scientific and medicinal institutions due to previous experiences with disinformation, lack of information and apologies, and political grandstanding. During the COVID-19 pandemic, the neglected mitigation guidelines by the Trump administration and vilified scientists promoting discredited treatment plans had further provoked the rise of falsehoods and distrust among the people, resulting in the percentage of Americans with a "great deal of confidence" in scientists dropping 16% from 2020-23.

P5 Countries

The P5 countries, the United States, China, France, Russia, and the United Kingdom, are pioneers in science, medicine, and healthcare. Moreover, they wield power and influence in generating information as well as disseminating information to other countries. It is pivotal that the P5 countries exercise their power to disseminate information of new and pre-existing science, technology, and universal healthcare.

Social Media Platforms/Companies

Social media is where the most misinformation and distrust are being exchanged in our modern time. Social media platforms such as Facebook, Instagram, X (formerly known as Twitter), YouTube, WeChat, TikTok, WhatsApp, etc. have at least 100 million active users. Social media has enormous potential and empowering opportunities, but there lies a great chance of miscommunication and misinformation on the platform. Despite the guidelines that social media companies attempt to impose, most, if not all, information on social media is never fact-checked; most users are susceptible to misinformation because the platform is not designed to detect misinformation, but rather, to share information, regardless of their reliability and credibility. This is the ironic phenomenon where individuals trust non-certified or credited individuals more than they trust certified professionals, particularly in healthcare. Moreover, all information is owned by companies, as a result, they can change an individual's exposure to misinformation with one alteration of the algorithm. Essentially, it means that if the algorithm is designed a particular way, it can be possible that all of the information you consume may be "false."

World Health Organization (WHO)

The World Health Organization, founded in 1948, is the United Nations Agency that promotes health, maintains the safety and health of countries, and serves the vulnerable, aiming to attain the highest level of health for all of humanity. The World Health Organization has become one of the world's leading public health journals. They are peer-reviewed monthly, along with keeping an open-access policy so the

content of the journal and its archives are available online. The organization has played a role in disproving pseudo-science in the past and ensuring that health literacy and equity were ensured for communities and individuals during the COVID-19 pandemic. One concerning phenomenon is that the rise of scientific and medicinal distrust and misinformation also means that people are refusing to trust credible organizations such as the United Nations.

Previous Attempts to Resolve the Issue

The internet and social media are still a relatively recent emergence; this makes the formation of concrete solutions difficult, as there are very few effective and feasible attempts to combat scientific and medicinal distrust and misinformation. This indicates that the formation of solutions to mitigate this issue is evermore urgent and pivotal.

United Nations Global Principles for Information Integrity

The United Nations issued Global Principles for Information Integrity, launched on 24 June 2024, to provide guidance on fighting the "fake." The principles include Societal Trust and Resilience; Health Incentives; Public Empowerment; Independent, Free, and Pluralistic Media; Transparency and Research. These principles envision an information ecosystem that ensures choice, freedom, privacy, and safety for all those involved; the vision includes technology companies based in multiple countries to prevent the monopoly over global information. There haven't been clear, distinctive, and significant actions made by this initiative. Drawing attention to raise awareness is essential, but it is insufficient to address the unprecedented rise of distrust and misinformation that has accumulated, particularly from the COVID-19 pandemic. It is recommended that the United Nations drive away from the generic proposal of general principles, but some distinct frameworks that countries can implement immediately. The major shortcomings of the Global Principles for Information Integrity are the neglect to notify the public of the process and countries' involvement in the principles. Thus, the impact of the solution, regardless of whether it may have been significant, has not been revealed to the public to be evaluated.

A/RES/78/4

UN Resolution 78/4 adopted by the General Assembly on 5 October 2023 attempted to solve the political declaration of the high-level meeting on universal health coverage. Despite the resolution not solely consisting of solutions that are directed at the rise of scientific and medicinal distrust and misinformation, drawing attention to the necessity of universal health coverage reaffirms that health literacy and equity originate from whether accurate information can be obtained. Many assume that healthcare services and universal health coverage have deteriorated after the COVID-19 pandemic;

however, in fact, it has been shown that government intervention in healthcare has increased across geographical regions, age groups, and gender groups. Due to the decrease in trust in the government to deal with COVID-19, there was a demand for better future government interventions to address the distrust among the people. However, the political declaration of the high-level meeting on universal health coverage hasn't necessarily mitigated the distrust and misinformation present in the general public.

John Hopkins National Priorities to Combat Misinformation and Disinformation for COVID-19 and Future Public Health Threats: A Call for a National Strategy

The Johns Hopkins Center for Health Security proposed a set of solutions and strategies called National Priorities to Combat Misinformation and Disinformation for COVID-19 and Future Public Health Threats: A Call for a National Strategy in March 2021. The set of solutions centers around four pillars: Intervene against false and damaging content as well as the sources propagating it; Promote and ensure the abundant presence and dissemination of factual information; increase the public's resilience to misinformation and disinformation; Ensure a whole-of-nation response through multisector and multiagency collaboration. Each of the pillars presents specific solutions that are feasible and refer to problems they attempt to mitigate, along with what stakeholders, contributors, and members should be involved in each solution to achieve feasibility. However, most of the solutions have already been implemented in the past and are commonly known among the public to have been implemented. The solutions present no uniqueness and personalization to various countries and their sovereignty in legislations, policies, and control over businesses in the economy.

Possible Solutions

- With the rise of Artificial Intelligence (AI) and its drastically developing ability to detect algorithms and adapt to new inputs of information, an approach to monitor viral online posts about science and healthcare will be able to efficiently and accurately debunk or prevent such content as quickly as possible. Moreover, the initial debunk provided by AI can be justified and supported by a legitimate researcher or scientist who can provide peer-reviewed information. In a society where the attention span seems to shorten every second, AI can also assist in delivering accurate but brief information by personalizing algorithms and mediums accordingly. However, the usage of AI should also be monitored as AI is equally susceptible to misinformation and disinformation. In fact, if AI fails to deliver accurate information, this may create a cascade of events that increase the distrust in science and medicine further.
- Many individuals have complained that scientific and medicinal information does not have efficient and approachable delivery. After the COVID-19 pandemic, where science was thrust

onto the national stage, many individuals lost confidence in science due to extreme measures that were not clearly explained or justified. Moreover, scientists' claims of certainty and terrible consequences if extreme measures were not obeyed were followed with contradictory orders that confused the public and forced them to feel lost and desperate for clarification ("Opinion | Why We Don't Trust Science Anymore"). The science and healthcare industry and community must strive towards having the public understand their new discoveries and announcements, rather than simply disseminating information that is challenging to understand by the general public.

- Regarding the dissemination of misinformation online, delegates are encouraged to consider addressing the problem from its roots; this could potentially be involving relevant non-governmental organizations in processes of amending social media policy and user guidelines or incentivizing social media companies to improve content-oversight mechanisms. As aforementioned, it is important to examine how online networks play a role in the topic at hand as they have become dominant sources of information and a major factor that influences people's perspectives.

- Upon crafting solutions to address this topic, delegates are reminded that the reasons behind individuals' distrust in science and medicine are not universal across social groups but rather often specific to different circumstances. Unique factors like religious beliefs and cultural values are suggested to be considered and carefully addressed in a respectful manner. Some possible approaches that could be given thought to include actively seeking to build partnerships with community representatives and establishing forums for positive two-way communication.

- Additionally, delegates are recommended to construct solutions that strive to foster non-partisan communication of accurate scientific and medicinal information and measures to eliminate political influences on people's scientific perceptions. These aspects of the topic could be addressed from various different starting points, such as implementing regulations that prohibit politicians from using scientific and medicinal information for political agendas, mandating transparency in sources of information used in campaigns, and taking education initiatives to elevate the scientific literacy of the general public–reducing educational gaps and enabling individuals to better discern misinformation.

Bibliography

"A/RES/78/4." *Undocs.org*, 2024, www.undocs.org/A/RES/78/4. Accessed 21 Nov. 2024.

Abrams, Zara. "How to Reverse the Alarming Trend of Health Misinformation." *Apa.org*, 2024, www.apa.org/monitor/2024/07/ending-health-misinformation.

Boyle, Patrick. "Why Do so Many Americans Distrust Science?" *AAMC*, 4 May 2022,

www.aamc.org/news/why-do-so-many-americans-distrust-science.

Cacciatore, Michael A. "Misinformation and Public Opinion of Science and Health: Approaches,

Findings, and Future Directions." *Proceedings of the National Academy of Sciences*, vol. 118, no.

15, 13 Apr. 2021, www.pnas.org/content/118/15/e1912437117,

https://doi.org/10.1073/pnas.1912437117.

Joshi, Mohit, and Payal Bhardwaj. "Impact of Data Transparency: Scientific Publications." *Perspectives

in Clinical Research*, vol. 9, no. 1, 2018, p. 31,

www.ncbi.nlm.nih.gov/pmc/articles/PMC5799949/, https://doi.org/10.4103/picr.picr_104_17.

Kleinman, Zoe. "Fake News "Travels Faster", Study Finds." *BBC News*, 9 Mar. 2018,

www.bbc.com/news/technology-43344256.

Kuppferschmidt, Kai . "The Five Biggest Challenges Facing Misinformation Researchers." *AAAS Articles

DO Group*, 31 Oct. 2024, www.science.org/content/article/five-biggest-challenges-facing-

misinformation-researchers, https://doi.org/10.1126/science.zt4nc9l.

Matsumoto, Koichiro. "China Takes Its Anti-Science Disinformation Campaign to a New Level." *The

Japan Times*, 6 Sept. 2023, www.japantimes.co.jp/commentary/2023/09/06/japan/china-japan-

fish-disinformation/. Accessed 21 Nov. 2024.

Nisa, Claudia F, et al. "COVID-19 May Have Increased Global Support for Universal Health Coverage:

Multi-Country Observational Study." *Frontiers in Public Health*, vol. 11, 25 Aug. 2023,

www.ncbi.nlm.nih.gov/pmc/articles/PMC10486985/,

https://doi.org/10.3389/fpubh.2023.1213037. Accessed 7 Oct. 2023.

"NMRC | Health Services Research Grant." *Nmrc.gov.sg*, 2023, www.nmrc.gov.sg/grants/competitive-

research-grants/hsrg. Accessed 22 Nov. 2024.

O'Leary, Karen. "Misinformation, Mistrust and Science." *Nature Medicine*, vol. 29, no. 12, Dec. 2023,

pp. 2972–2972, www.nature.com/articles/s41591-023-02714-9, https://doi.org/10.1038/s41591-

023-02714-9.

"Opinion | Why We Don't Trust Science Anymore." *WSJ*, 21 Nov. 2023, www.wsj.com/articles/why-we-dont-trust-science-anymore-scientists-researchers-covid-ef97cd07.

Peltier, Elian. "Russian Disinformation Targets U.S.-Backed Anti-Malaria Campaign." *Nytimes.com*, The New York Times, 14 Oct. 2024, www.nytimes.com/2024/10/14/world/africa/russia-africa-disinformation-malaria-.html.

Petrosyan, Ani. "Number of Internet and Social Media Users Worldwide as of October 2024." *Statista*, 5 Nov. 2024, www.statista.com/statistics/617136/digital-population-worldwide/.

Pittman, Rachel. "Don't Believe the Disinformation: The UN Makes America Stronger | SDG Action." *SDG Action*, 16 Sept. 2024, sdg-action.org/dont-believe-the-disinformation-the-un-makes-america-stronger/. Accessed 21 Nov. 2024.

Salah, Lauren Rohrs. "Medical Misinformation Harms People from Communities That Are Marginalized | Johns Hopkins Center for Health Equity." *Johns Hopkins Center for Health Equity*, 26 July 2024, publichealth.jhu.edu/center-for-health-equity/2024/medical-misinformation-harms-people-from-communities-that-are-marginalized.

Sell , Tara Kirk, et al. *National Priorities to Combat Misinformation and Disinformation for COVID-19 and Future Public Health Threats: A Call for a National Strategy*. 2021.

Why Are Researchers Reluctant to Share Their Data? 26 Nov. 2023, www.researchgate.net/post/Why_are_researchers_reluctant_to_share_their_data. Accessed 22 Nov. 2024.

Yu, Wenting, et al. "Correcting Science Misinformation in an Authoritarian Country: An Experiment from China." *Telematics and Informatics*, vol. 66, Jan. 2022, p. 101749, https://doi.org/10.1016/j.tele.2021.101749.

---. "Correcting Science Misinformation in an Authoritarian Country: An Experiment from China." *Telematics and Informatics*, vol. 66, Jan. 2022, p. 101749, https://doi.org/10.1016/j.tele.2021.101749.