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Triple-Threat: COVID-19's Accompanying Infodemic and Data Pandemic

With the physical world on lockdown, the coronavirus disease accelerated our dependency on digital infrastructures to learn, work, and socialize from home. However, an ethical debate has emerged from the repercussions of relying on the predominantly unregulated digital world. The COVID-19 pandemic catalyzed an equivalent infodemic and datafied pandemic, wherein the spread of misinformation overwhelmed the reality of the pandemic, data production excluded already vulnerable marginalized communities, and governments normalized digital surveillance through contact-tracing surveillance technologies. To combat these externalities and move towards an inclusive digital world, global data literacy is fundamental.

The digitization of COVID-19 led to the emergence of an infodemic that elicited chronic confusion due to the circulation of misinformation around the world, which ultimately threatened a unified global response to the virus. As concerned individuals searched for credible information about the virus and waited for updates from government communication, an infodemic manifested wherein the "overabundance of information, accurate or not" made it challenging for people to differentiate between sources and find truth (Di Salvo & Milan 2020). People exhibited over a 50% increase in internet usage for COVID-19 updates across generations, which was matched by this exponential diffusion of information (Banerjee & Meena 2021). The reliance on social media and the internet as the primary source of answers hijacked public response due to the potential for this content to spread faster and further than scientific literature (Milan 2022). This information disorder became especially dangerous when global leaders began amplifying hysteria by questioning the existence of virus: Brazil's President dismissed the existence of COVID-19, Mexico's President promoted normalcy and dismissed the virus as a conspiracy against him, and America's President told citizens that the harmless virus would disappear (Milan & Treré 2020). Furthermore, President Trump, found to be the "largest driver of the infodemic" (Stolberg & Weiland 2020), promoted hydroxychloroquine as a potential treatment to the virus without the endorsement from a public health official, which led to an increase in hydroxychloroquine purchases (Banerjee & Meena 2021). The lack of reliable data and information, as well as the misalignment of government leaders and public health organizations, was a destructive catalyst for mass hysteria and political tensions as people struggled to find objective truth about the pandemic.

While life in the virtual world raises ethical concerns, there are also consequences for those that are not connected. The pandemic exacerbated existing inequalities for marginalized communities like asymmetrical access to resources and exclusion from the virus's narrative, which threatened their ability to respond to the pandemic. Internet access to the virtual world was crucial to maintaining social relationships, participating in daily functions like work and healthcare, and accessing information during the COVID-19 lockdowns, and yet only "53% of the world population has access to the internet" (Qureshi 2021). On-going marginalization has hindered populations from gaining technological access and skills – this notion of asymmetrical access was heightened during the pandemic as marginalized communities struggled accessing healthcare, virus and vaccine updates, and other important but digital life-saving resources. Another ethical concern arises from the way that quantification defined the narrative of the pandemic, as there is a "virtual absence of official data about groups" that are not digitally connected (Milan & Treré 2020). Because data is tied to peoples' visibility and therefore survival and support in the context of the pandemic, "invisibility might equal death" for marginalized populations as they remain undetectable to governments and social groups (Milan & Treré 2020). The combination of disproportionate internet access and the lack of inclusion in data work contingently to unfortunately ensure that these vulnerable populations stay hidden.

The widespread normalization of digital surveillance is another concern exacerbated by the dynamics of COVID-19 and our datafied society, which elicits ethical concerns for privacy rights. Over 100 countries around the globe implemented surveillance tools via mobile applications to track the spread of the virus, which some argue has provided the government with "an excuse to exert control over their populations using digital means" (Afroogh et al, 2022). This technology requires the storage of sensitive personal data to function, like a user's location and recent social contacts, as well as high public participation to be efficient (Lin & Matin 2020). With private health data on the line, contact-tracing technology forces citizens "to choose between two fundamental rights that are not incompatible with one another" (Di Salvo & Milan 2020). The datafied world equips the government with overwhelming surveillance capabilities, which consequently "rewires the world's sensibilities about privacy" (Lin & Martin 2020). Governments around the world failed to provide citizens with transparency about this unfamiliar system, which has further fragmented public trust and confidence. For example, the French government contacted Google and Amazon about "loosening privacy policies to facilitate" their

contact-tracing app development, which directly opposes user protections (Di Salvo & Milan 2020). Other governments impaired the voluntariness of their technologies. For instance, the Chinese government forced exposed individuals to quarantine before their first symptom, while the West Australian government passed a “bill to install surveillance gadgets in people’s homes” to monitor quarantines (Lin & Martin 2020). This new era of digital surveillance facilitated by the pandemic generates ethical concern due to the lack of protections against access and usage of this sensitive data, for possession in the wrong hands could lead to the criminalization of vulnerable populations.

The desperation for answers about coronavirus in this era of ubiquitous data elicited a fertile ground for an accompanying data pandemic: misinformation promoted untrustworthy information and attempts at comprehensive data production excluded marginalized communities while simultaneously infringing on the privacy rights of those with smart technologies. To address these ethical concerns elicited by the pandemic, digital literacy is crucial to ensure that each individual maintains agency in this evolving datafied society (Nguyen 2021). As citizens contribute to the datafied world with every click online, it is fundamental to equip everyone with the skills necessary to engage in their digital world. Data literacy must no longer be considered a privilege: it is important that government funding is allocated to train citizens on how to critically assess the data infrastructure encompassing our modern world.

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