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## We Need the Lens of Equity in COVID-19 Communication

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### ABSTRACT

The ongoing COVID-19 pandemic has brought forward the centrality of public communication as a force for information, and in highlighting the differential impact on diverse segments of the society. Information and communication technologies-led developments including social media have previously been discussed as instruments of democratization of knowledge. However, the evidence so far shows that the promise remains unfulfilled as upper socioeconomic groups acquire information at a faster rate than others. The communication inequalities have only reinforced the existing societal fault lines of race, class and place.

As the first pandemic of the social media age, COVID-19 has also given rise to an “*infodemic*”, providing fertile ground for the spread of information, misinformation and disinformation. With limited gatekeeping, an immense amount of unprocessed scientific information is being put forward to publics not trained in science.

In this commentary, we offer some propositions on how disinformation on COVID-19 has become mainstreamed through social media’s spiral of amplification and what role public communication has in an emergency from a lens of equity. We raise the question of whether the tremendous flow of scientific information during the COVID-19 pandemic has a differential impact on different socioeconomic groups. We propose that more systematic research is urgently needed to understand how mis/disinformation originate, spread and what their consequences are. In our view, research in health communication inequalities is foundational to mitigating the current off-line and online ravages of the pandemic.

The speed and spread of COVID-19 across the world leaving death and devastation in its wake surprised many, despite repeated warnings from health professionals (Blumenshine et al., 2008). Data are accumulating, with depressing clarity, that prevalence and mortality, and the social and economic consequences of COVID-19 have disproportionately affected the well-being of the underserved groups globally.

The unique and arguably singular nature of this pandemic brought to the fore the centrality of public communication, as a force for information and as a tool in promoting non-pharmaceutical interventions (NPIs) in the absence of vaccines and treatment, and in highlighting the differential impact on different segments of the society. While the role of social media in the spread of misinformation is attracting attention, virtually no attention has been paid to the issue of inequalities in communication and how they may have widened the divides and exacerbated the structural inequities. In this commentary, we offer some propositions on how disinformation on COVID-19 has become mainstreamed and what role public communication has in an emergency from a lens of equity.

### COVID-19 health disparities

In general, and especially during public health emergencies, groups with less social power such as racial and ethnic minorities, immigrants, those in lower socioeconomic positions, and

in certain neighborhoods and geographies face the brunt of the disease burden. A myriad of factors and pathways are known to cause the inequalities including how larger upstream factors such as social and economic policies impede access to essential conditions for a healthy life such as housing, quality education, employment, and safe neighborhoods (Braveman et al., 2011). These, in turn, preclude access to health care and opportunities for preventive practices resulting in adversity in terms of morbidity and mortality to the disadvantage of these groups. Larger cultural forces such as discrimination, racism and sexism also “get under the skin” affecting both physical and mental well-being (Krieger, 2011).

Even though COVID-19 infection, and its deadly consequences through mortality and long-term morbidity, is still ongoing, patterns are becoming clearer. Ongoing analyses and reports show that communities with greater proportion or higher numbers of ethnic and racial minority populations have emerged as “hot spots” for COVID-19 deaths (Clark et al., 2020; Webb Hooper et al., 2020). Analyses in selected states also show excess deaths among communities with higher poverty, density of housing, and people of color (Chen et al., 2020).

There are also other adverse consequences on social, economic, and other dimensions of life that are emerging. For example, while the infection is relatively lower among women, this undermines the social and economic impact on pregnancy, motherhood, caregiving, and employment in informal sectors

with no policies for sick leave or insurance, and childcare (Gausman & Langer, 2020). In fact, with greater proportion of undocumented workers, immigrants, and people of color who are employed in sectors that are going out of business, and lack access to Internet, the impact of COVID-19 goes beyond concerns over immediate health to larger upstream factors of education, employment, and security.

In summary, the revelation that consequences of COVID-19 were, and are being faced by groups and communities that have been already suffering, *should not* have been a revelation knowing what happened before. Yet the public discourse on COVID-19-related health inequalities did not manifest until April 2020 (Chen et al., 2020), revealing a failure of both public health and communication.

### Public communication and COVID-19

There are some singular features that make COVID-19 pandemic so interesting for communication scholars and practitioners. One, science as an enterprise, is usually conducted in relative obscurity in the labs or the field but is now occurring under intense and constant public scrutiny. Scientific developments are being covered in the media and discussed in the social media with virtually no time lag between discovery and dissemination, making any attempt at controlled and calibrated dissemination of scientific information a lost cause. This poses a problem for processing the immense amount of scientific information by publics not trained in science.

Two, in a related vein, COVID-19 is the first pandemic of the social media age. While we have experienced other pandemics and threats such as SARS, H1N1, MERS, and Ebola in the last two decades, the extensive global penetration of social media provided a fertile ground for the spread of information, misinformation, and disinformation. Information on COVID-19 has spread unhindered at a great speed with limited gatekeeping from usual filters such as editors, advocates, and interest groups.

The two aforementioned developments raise at least two significant questions. One, what is the nature of discourse in the communication environment on COVID-19? And, is the tremendous volume of flow of scientific information having a differential impact on different socioeconomic groups?

### A spiral of amplification: Social media and the mainstreaming of mis/disinformation

While information on COVID-19 science has exploded, what has been drawing attention in academic and policy circles is the misinformation and disinformation that has been spreading across communication platforms including mass and social media. Misinformation is information that is “contrary to the epistemic consensus of the scientific community” and disinformation is deliberate spreading of falsehoods for political ends (Swire-Thompson & Lazer, 2020). While COVID-19 misinformation is understandable and expected as science is evolving, COVID-19 disinformation is drawing scrutiny. It is difficult to document and separate disinformation from misinformation, but research has begun to document stories on

COVID-19 that are clearly fake, false or misleading and that have circulated in social media on various topics including conspiracy theories on the origin of the virus, its spread, prevention, and treatment (Carnegie Mellon University, 2020). While the sources of the disinformation are not clear, some reports suggest the role of state actors and organizations.

What is interesting about COVID-19 and that which warrants more systematic inquiry is the *mainstreaming of disinformation*. In this pandemic, there has been an unusual confluence of pre-organized groups that are against state actions generally such as conspiracy theorists, anti-science groups, pro-gun lobbies, and anti-vaccine groups which, either deliberately or adventitiously, are working together to raise their voice. Second, more critical, and more unusual, is the fact that their voices have been further amplified by political authorities including the White House in the US which lent a megaphone if not credibility to the conspiracies. Our proposition then is that social media have contributed to the *spiral of amplification* where seemingly or deliberately misleading bits/bytes of information from obscure corners of the Internet have entered the mainstream and found a footing in public discourse. More systematic research on how the *spiral of amplification* function of social media works and its consequences is urgently needed.

### COVID-19 flow of information and communication inequalities

COVID-19 driven inequalities in economic, social, and health sectors also find a parallel in communication. And, given the absence of a vaccine and effective treatment, classic public health strategies, and NPIs are key to “flatten the curve.” The awareness and practice of NPIs depend on public communication and persuasion. But is the awareness and spread of information on COVID-19 uniform across all social groups? Empirical evidence is still to come but our experience with prior health emergencies point to what is likely to happen.

The knowledge gap hypothesis, for example, proffers that increasing flow of information in a social system, as is the case with COVID-19, is likely to exacerbate existing differences among social strata as upper SES groups will acquire information at a faster rate than others (Tichenor et al., 1970). The hypothesis has been repeatedly supported especially in science and health areas (Lee & Ho, 2015; Viswanath & Finnegan, 1995), and particularly in times of pandemics when science is still emerging (Savoia et al., 2013).

Going beyond knowledge gaps, some have focused on communication inequalities – differences among different social groups in accessing, processing, and using information. Social determinants such as education, race/ethnicity, income, and employment either directly or indirectly through knowledge and awareness influence the outcomes during public health emergencies (Lin et al., 2014).

Given the vulnerabilities of certain population segments, it is also critical to understand that outcomes may be influenced by factors at the intersection of multiple social status categories. For example, a Pew study on science knowledge showed that Whites scored higher on knowledge compared with Blacks (Pew Research Center, 2019) (Figure 1). But what is

## More educated Americans score higher on the science knowledge scale

Mean number of correct answers out of 11

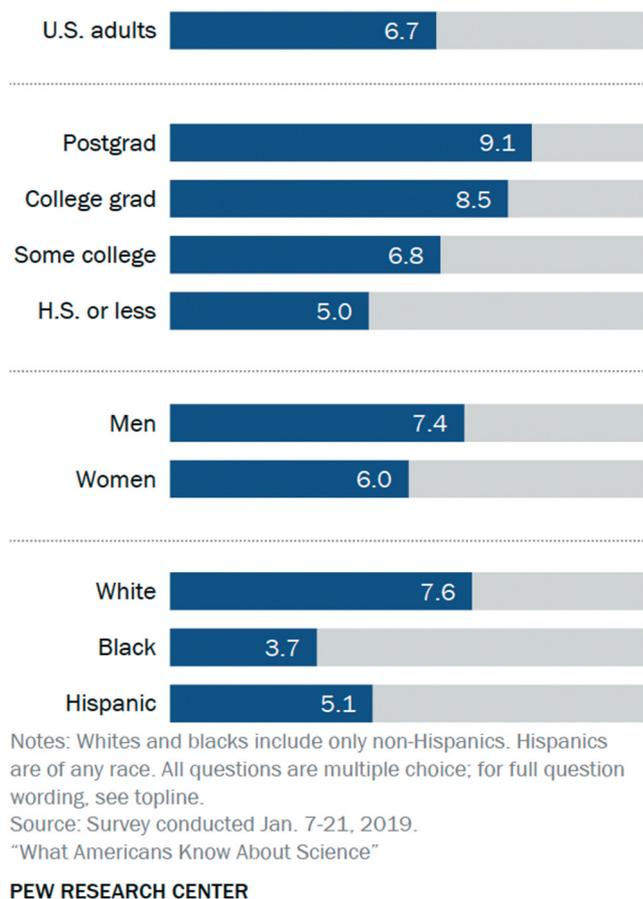


Figure 1. Americans knowledge of science.

more instructive is that Whites with only some college education scored higher than blacks with college degrees (Pew Research Center, 2019) (Figure 2). This is a clear demonstration of science communication failure as well as differential benefits of schooling among different groups.

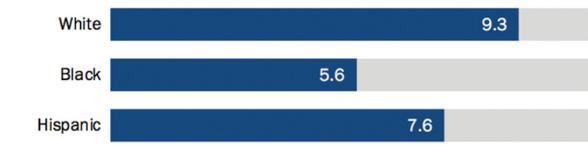
## Conclusions

While other pandemics like the 1918 flu has killed tens of millions, what is so unusual about COVID-19 is the breadth of its global impact in such a short period of time. While global migration has been posited as a reason for the scale of its impact, the worldwide penetration of social media created another type of pandemic – “infodemic” resulting in the spread of misinformation and disinformation with organized opposition to well-tested public health mitigation measures. For the first time in human history, we have seen how mis/disinformation is being mainstreamed and social media have amplified the disinformation, and we may be excused for being surprised with these twin phenomena. We need more empirical work on

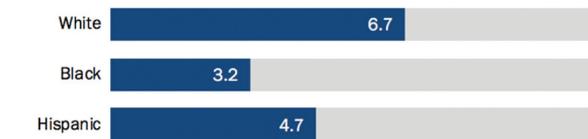
## Among the college educated, whites score higher than blacks and Hispanics on science knowledge

Mean number of correct answers out of 11

Among those with a college degree or more



Among those with some college education or less



Notes: Whites and blacks include only non-Hispanics. Hispanics are of any race. All questions are multiple choice; for full question wording, see topline.

Source: Survey conducted Jan. 7-21, 2019.

"What Americans Know About Science"

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Figure 2. Intersectionality and science knowledge.

how mis/disinformation originate, spread and what their consequences are. But what is not surprising are inequities that emerged during the pandemic given all we knew about health disparities in general and vulnerability of certain groups to public health emergencies in particular. That we as a society were caught napping and that this has not been observed until four months into the crisis is a collective indictment of those of us in the business of policy, practice and study of population and individual health. Information and communication technologies-led developments including social media have been discussed as instruments of democratization of knowledge. The evidence so far shows that the promise remains far from being fulfilled and in fact, may end up only reinforcing the existing societal fault lines of race, class and place. In our view, research in health communication inequalities is foundational to mitigating the current off-line and online ravages of the pandemic.

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