THE EFFECT OF MEDIA REPRESENTATION OF COVID-19 ON THE CONSTRUCTION INDUSTRY

A STS Research Paper submitted to the Department of Engineering and Society
Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science, Civil and Environmental Engineering

By

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March 30, 2023

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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AN EVALUATION OF SOCIAL MEDIA REPRESENTATION OF COVID-19 ON THE CONSTRUCTION INDUSTRY

In January 2020, the People's Republic of China started noticing increasing cases of a virus called the coronavirus, also known as COVID-19, in the city of Wuhan (CDC, 2022). Initial concerns were muted but as cases rose and news agencies started reporting the outbreak, the government became increasingly concerned and started issuing lockdown orders to reduce the spread. Unfortunately, these measures were far too little, and far too late, and COVID-19 managed to spread to other countries. Fast forward to March 2020 and the virus had infected so many people that the World Health Organization declared COVID-19 a global pandemic (CDC, 2022).

COVID-19 has had a dramatic impact on global economic progress and industries, particularly the construction field (Iqbal, 2021). Millions of the construction workforce have felt the adverse effects of COVID-19 on industry performance and site productivity. With the latest exposure to high influence social media platforms, COVID-19 limited the performance of work across all skilled-labor trades and construction management for on-site progress.

The technical project and tightly coupled STS research project directly address this issue. The objective of the technical project is to observe the impact COVID-19 had on construction labor productivity and develop a real-time productivity tracking system that factors in pandemics. The STS research project will focus on obtaining information on various studies to evaluate the effect of media representation within the construction industry. The system in which media representation of COVID-19 can be examined through a view of Pinch and Bijker's framework of the "Social Construction of Technology" (Pinch and Bijker, 1987).

CONSTRUCTION INDUSTRY DURING COVID-19 "INFODEMIC"

With social media being one of the most rapid and impactful ways of obtaining and delivering information in the modern era, the spread of COVID-19 headed news articles worldwide (Ali, 2020). Being informed on prevalent societal topics is imperative to a working community. However, The World Health Organization has called attention to the "infodemic" that social media plays a dangerous role in amplifying the spread of misinformation (Cinelli, 2020). A survey study reveals that a large majority of adults obtained information about COVID-19 through social media as presented in Figure 1 below.

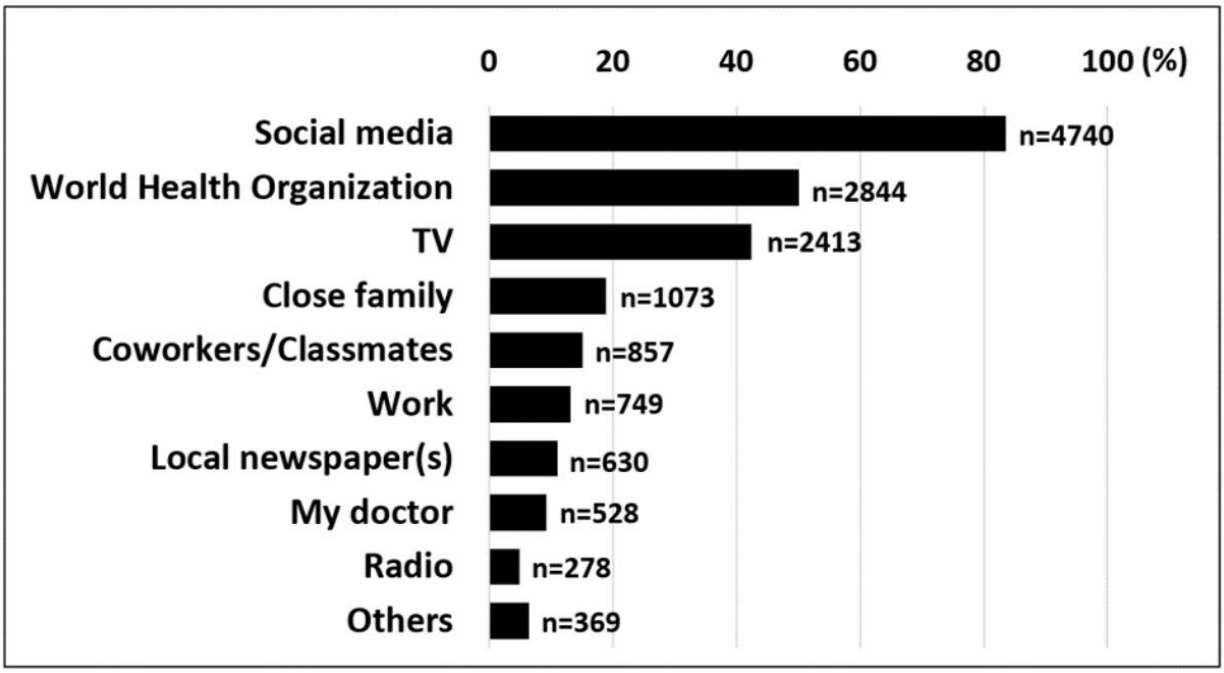

Figure 1: Sources of COVID-19 information. The trend reveals that a large majority of adults obtained information on COVID-19 through social media. (Ali, 2020).

Consequently, the construction sector has been highly disrupted by the spread of this misinformation by delaying and halting construction projects under development (Gamil 2020). In the construction industry, the skilled workforce is one of the most variable resources involved

in projects. With the construction workforce being halted, schedules and costs are being negatively impacted across all projects (Ogunnusi, 2020). The construction sector represents a key component of countries' economies, approximately 13% of global gross domestic product (Araya 2021). Through the misinformation on social media platforms, many organizations and leaders were quick to limit project and product progress.

The construction industry was one of the first industries to be impacted by COVID-19, and the workers have been subjected to an increased risk of contamination (Koh, 2020). As mentioned previously, construction projects were suspended and needed to be altered with new ways of operating to ensure schedules get back on track. The construction workforce needed to adjust to new social distancing requirements and protection policies to provide a safe working environment.

COVID-19 is not affecting only the construction workforce's physical health, but also their mental health and wellbeing (Pamidimukkala, 2021). Project engineers and contractors are observing their workers' mental health problems, as the workers mention anxiety as one of their main concerns during COVID-19. In a survey conduct by the Associated General Contactors of America, 70% of their participants identified "employee anxiety" as their main issue in relation to concerns about supply chain issues and government shutdowns (Shaw, 2020). In addition, many construction laborers feel stressed about their job stability since they did not know if they would lose their jobs and how they would fulfill their financial obligations. The number of construction jobs dropped in correlation with spiked COVID-19 case as shown in Figure 2 on page 4.

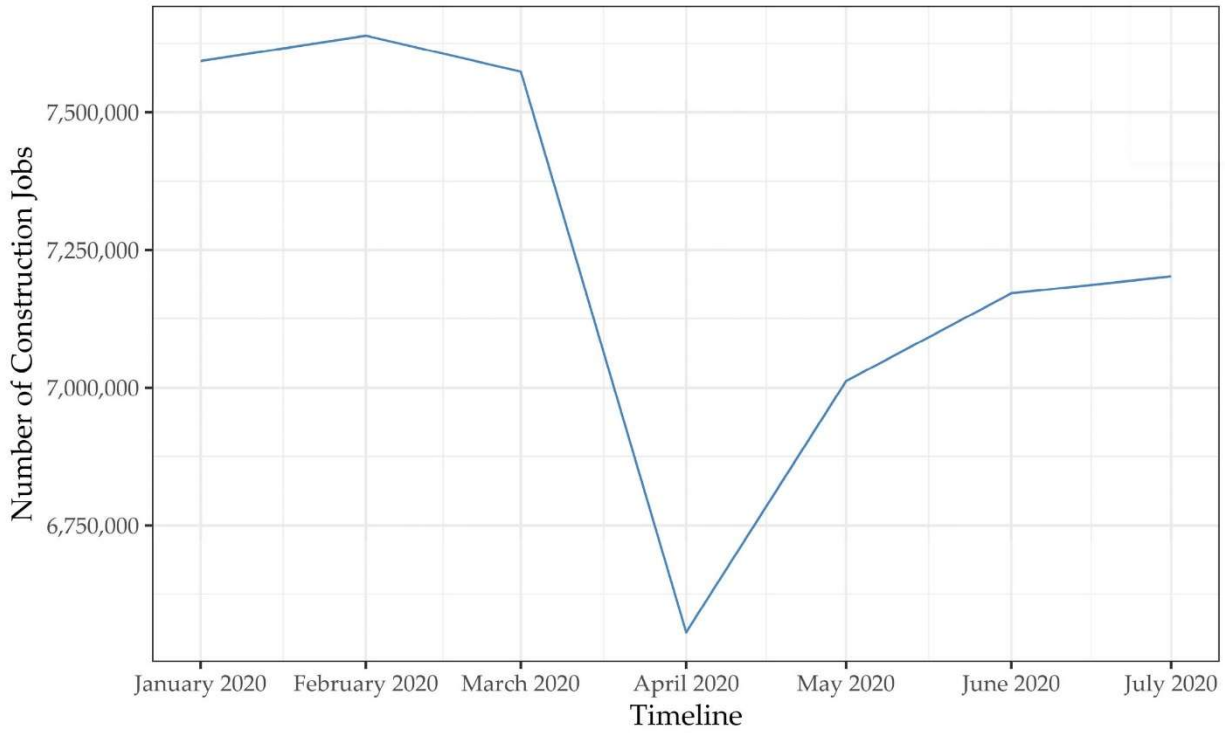

Figure 2: Construction industry employment data between January and July 2020. The number of construction jobs significantly dropped between March and May 2020. (Alsharef, 2021).

SOCIAL MEDIA THROUGH A LENS

With social media being one of the most rapid and impactful ways of obtaining and delivering information in the modern era, scientific misinformation and political disinformation have been spreading across platforms like wildfire. The construction industry has been highly disrupted by the spread of this misinformation by delaying and halting construction projects under development (Gamil 2020). With the construction workforce being halted, schedules and costs are being negatively impacted across all projects (Ogunnusi, 2020). Through the misinformation on social media platforms, many organizations and leaders were quick to limit project and product progress. The system in which media representation of COVID-19 can be examined through a view of Pinch and Bijker's framework of the "Social Construction of

Technology" (SCOT) (Pinch and Bijker, 1987). The misinformation through the lack of communication with the parties involved can be demonstrated in Figure 3 below.

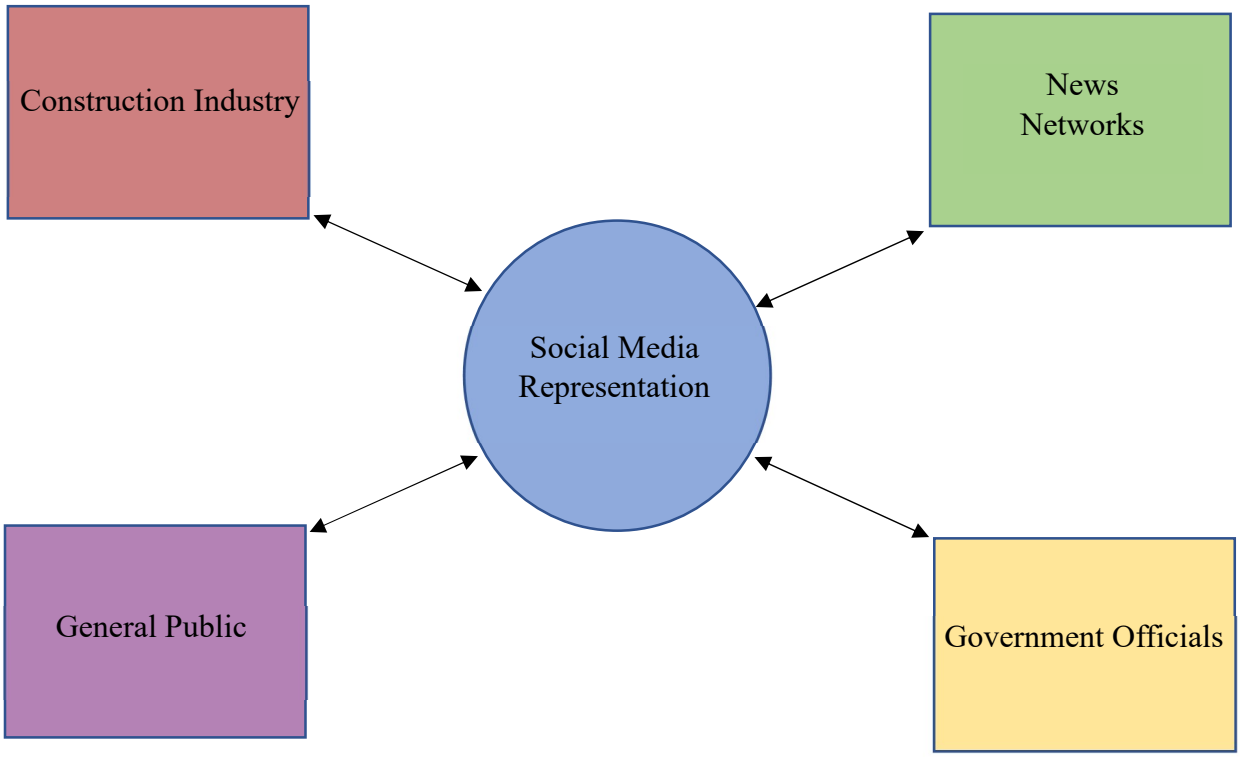

Figure 3: Current System of Communication: There is a lack of communication between parties with the use of social media. The lines connecting them to the issue do not overlap, which creates a barrier and major miscommunication between the parties. (Adapted by Alexander Maleski, 2022 from W. Carlson, 2009)

The Social Construction of Technology involves analyzing the development of technology as a process between relevant parties. As social media representation has grown over recent years, there are many relevant parties that can be associated with this technology regarding COVID-19, such as the construction industry, government officials, news networks, and general public. The stakeholders in Figure 3 reveal the missing overlapping links without the use of social media representation. This lack of communication results in misinterpretation between the groups, which can lead to misinformation. The use of the SCOT model will bridge that barrier of understanding where the major miscommunication occurs between all

stakeholders. For this model, the news networks create reports on events happening across the country and use social media to spread their voices whether true or false. The general public is observing the information that is on social media and making decisions on whether to believe it or not. The construction industry creates and follows policies from the given information on social media, which can result in the loss of many jobs and billions of dollars. Government officials try to regulate the information about COVID-19 on social media to properly inform all stakeholders. Through the SCOT framework, the stakeholders, their interactions through social media, and their interactions without social media can be observed.

MISINFORMED SOCIETY

During the COVID-19 pandemic, the World Health Organization has called attention to the "infodemic" that social media plays a dangerous role in amplifying the spread of misinformation (Cinelli, 2020). The construction industry has felt the negative effects of the "infodemic" on site performance and productivity. In the construction industry, the skilled workforce is one of the most variable resources involved in projects. In particular, the construction industry suffered unique challenges such as unmet contractual obligations, material delays, and shortages, and in some cases, government-mandated suspension of operations (New York State Government, 2020). With the latest exposure to high influence social media platforms, COVID-19 limited the performance of work across all skilled-labor trades and construction management for on-site progress.

The COVID-19 pandemic has caused a complementary infodemic, whereby various outlets and digital media portals shared false information and unsourced recommendations on health (Mheidly, 2020). The use of social media platforms is a very powerful outlet for the distribution of health knowledge. These media platforms become portals through which the

general public looks for accurate scientific information and government policies. However, when scientific misinformation and political disinformation is mixed into the discussion, the confusion and distrust caused uncertainties and mass hysteria. An unprecedented infodemic has been witnessed to create massive damage to human society (Pian, 2021).

It is imperative in sourcing correct information from social media platforms into the construction industry should result in on-schedule and lower cost projects. These saved costs and schedules will result in more projects funded by government and private equities. The presence of new departments and technologies may provide more ways to counteract scientific misinformation and political disinformation across all social media platforms. The overarching question is to reveal social media's impact on the construction industry of viruses and pandemics, in particular COVID-19.

NEW METHODS AND TECHNOLOGIES

During the COVID-19 pandemic, there were many uncertainties and concerns about any information being posted on social media, which led to widespread vaccine hesitancy (Kattumana, 2022). Galeotti and Meini leveraged philosophical and psychological literature to identify scientific misinformation under the same umbrella as fake news (Galeotti & Meini, 2022). Through this methodology, they were able to present ways of identifying misleading information from completely fabricated news. To effectively educate the construction industry through social media, society must reform scientific platforms and communications. A perfect balance must be fostered to ensure the success of an informed society. With the reformation of scientific communication, society can be better connected and play a bigger role in news platforms.

Myers and Grant address how the staff reductions of tech companies reflect a downward trend across the industry that threatens to undo many of the safeguards that social media platforms put in place in recent years to ban or tamp down on disinformation (Myers & Grant, 2023). This shows that these social media companies are no longer putting the fight against false information as a high priority. The experts tracking social media misinformation fear that this issue will further erode trust online (Myers & Grant, 2023). Although none of the companies comment on officially abandoning the fight against misinformation, they have put the issue on the back burner. The consequences of easing up on the fight against misinformation have become very clear on Twitter with a surge in antisemitic content with the transition of ownership to Elon Musk (Myers & Grant, 2023). Myers and Grant wanted to reveal the recent pullbacks of major social media platforms on issues of scientific and political misinformation, and the potentially large ramifications it could have on their communities.

FUTURE IMPLICATIONS FOR INFECTIOUS DISEASES ON SOCIAL MEDIA IN THE CONSTRUCTION INDUSTRY

By viewing social media through a lens, COVID-19 has been a major contributing factor to the misinformation throughout the construction industry. Through new technologies and methodologies, communication on social media platforms can be reformed and create a well-connected society. However, there have been recent pullbacks by major tech corporations on issues of scientific misinformation due to the 2023 layoff wave. This downward trend has had a negative impact on the progress of safeguarding political disinformation and scientific misinformation on social media platforms. The construction industry took a major hit from this misinformation on social media by delaying project schedules and increasing total costs. In the future, the construction industry must lobby government officials to increase information safety

maintenance on social media platforms to prevent another shutdown crisis, and continue pursuing research on “infodemics.”

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