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Mapping Misinformation In The Coronavirus Outbreak



The coronavirus outbreak has sent ripples of fear and confusion across the world. These sentiments—and our collective responses to the outbreak—are made worse by rampant misinformation surrounding the new strain of the virus, COVID-2019. In this post, I survey some of the most pervasive areas of tentacular coronavirus-related misinformation that has proliferated online -- as well as the responses of social media companies like YouTube, Facebook, Pinterest and TikTok that may ultimately prove inadequate given the magnitude of the problem.

Misinformation About The Outbreak

Early reports—before the WHO [declared](#) the outbreak a Public Health Emergency of International Concern—vastly exaggerated the death toll

associated with infection caused by COVID-2019. On January 24, for example, when the estimated [death toll](#) attributable to coronavirus infection was still under 100 cases, several websites claimed there were over 10,000 fatalities in Wuhan alone.

Other strains of misinformation that formed during the early stages of the outbreak challenged scientific accounts of the emergence of the new coronavirus, subsequently birthing the idea that the outbreak is the product of governmental or individual agendas. Even though the pathogen causing the ongoing outbreak is officially called [novel](#) coronavirus, multiple stories circulating on social media claimed that the virus had either long existed, or had been engineered to produce the outbreak. One of the most diffused theories is improbably based on the fact that Lysol and [Clorox](#) products list "human coronavirus" among the pathogens killed by use of these disinfectants. The theory disregards the fact that Lysol and Clorox reference past strains of coronaviruses, whose existence does not invalidate the emergence of a new strain.

Intertwined subsets of misinformation blend politically motivated conspiracy theories with a downplay of the seriousness of the pathogen causing the outbreak. In a 2019 [Netflix documentary](#), Bill Gates warned against a global pandemic that could potentially originate in China. A few weeks after the Wuhan outbreak started making headlines across the world, a generic mention of a possible outbreak had been spun into a myriad of online articles [claiming](#) that Gates orchestrated the outbreak with the intent to profit from it by sponsoring the sale of vaccines. Some of the most visible manifestations of this particular embodiment of misinformation in the United States were closely linked to QAnon, a network promoting extremist conspiracy theories which has been primarily active in the political field and is [considered](#) a potential domestic terrorism threat by the FBI. QAnon members relied on the Gates narrative to [characterize](#) the outbreak as a "fad disease" and used social

media to propagate the idea that drinking a "[magic mineral solution](#)," also known as MMS or 20-20-20 spray, will prevent infections by COVID-2019. The solution consists of a bleaching agent. In 2019, the [FDA issued a warning](#) defining the side effects of MMS intake as "dangerous" and "potentially life threatening."

Misinformation About Vaccines And Proprietary Rights Over Related Technology

One particularly problematic form of misinformation related to COVID-19 clusters around the topic of vaccines and biotechnologies used to produce vaccines and diagnostics.

An Indonesian newspaper reported that several people, mistakenly believing that pneumonia vaccines are effective against the Wuhan coronavirus, visited [medical facilities](#) and requested the administration of vaccines like Prevnar and Pneumovax 23. These pneumococcal vaccines, however, protect against different types of bacterial pneumonia, not viruses causing respiratory infections.

A different strain of misinformation, spread predominantly online, focuses on the existence of a proprietary rights over coronaviruses. Groups like QAnon, as well as some members of the anti-vaccination community, have used social media to suggest that the United States government, or publicly funded research institutions, "own the coronavirus"—with the [implication](#) that the current outbreak is the product of a governmental or quasi-governmental conspiracy—or, in some cases, of [individuals](#) like Gates.

This idea appears to derive from poorly interpreted patent searches. There are, in fact, patents covering inventions developed in connection with different forms of coronaviruses. In 2004, the Centers for Disease Control and

Prevention (CDC) filed a [patent](#) application covering specific isolated components of a type of coronavirus distinct from COVID-2019: severe acute respiratory syndrome (SARS). The patent was issued and published in 2007 and is set to expire in 2024. Similarly, in 2015 the Pirbright Institute, a British research institute, applied for a [patent](#) on an attenuated form of coronavirus, which was granted in 2018 and is set to expire in 2035. This form of coronavirus, however, is related to the Avian infectious bronchitis virus, which is not known to pose a threat to humans. Existing patents thus cover inventions related to different types of coronaviruses, none of them the one at the root of the COVID-19 outbreak. Moreover, in line with current [caselaw](#), patents cannot possibly cover the viruses themselves.

The spread of misinformation about patent-related issues has quickly migrated outside the realm of extremist online speech. For instance, a relatively prominent public figure, Shiva Ayyadurai, who challenged Senator Elisabeth Warren in an unsuccessful 2018 U.S. Senate run, has [used Facebook](#) to inaccurately convey the idea that the coronavirus itself is owned by the Pirbright Institute. Similarly, segments of the anti-vaccination community have [increased the online footprint](#) of coronavirus misinformation by reposting many of the erroneous patent-centric narratives, at a time in which vaccine hesitancy has been [added to the WHO list](#) of leading threats to global health.

The Role Of Social Media

Even before the COVID-19 outbreak, social media companies had been called to address problems related to vaccine misinformation. Pressure to curb online misinformation mounted during the 2019 measles outbreak, and companies responded in different ways. Pinterest pioneered a [blocking approach](#), removing all content related to vaccines, irrespective of accuracy (which later was relaxed to [allow](#) content from public health organizations). Facebook and other companies opted for a [downgrading approach](#) by not promoting anti-

vaccination posts (and thus causing them to fall down the rankings of search results), but kept them available to users of their platforms.

As the COVID-19 outbreak unfolds, social media companies have taken additional steps to curb misinformation. While many of the mechanisms established during the measles outbreak remain in place, several companies monitoring misinformation are looking beyond the field of vaccines and monitoring all types of coronavirus-related misinformation. Facebook, which has faced [criticism](#) for its limited approach with regard to vaccine content, announced in early February that it would [remove](#) all posts furthering “false claims” or “conspiracy theories.” Pinterest and TikTok maintain a similar policy. Twitter [suspended](#) an account which was used to promote coronavirus conspiracy theories. Several websites now have [fact-checking](#) features embedded into their operations.

Nevertheless, these improvements over the response to previous outbreaks face serious limitations. Fact-checking posts and other information on social media requires a near-real time response, an [elusive](#) goal. Once posted online, misinformation hardly ever goes away completely. Consider the case of the misinformation about the bleach solution which would purportedly prevent coronavirus infections: it has been debunked, but it can still be [easily found](#) online. Moreover, because each social media company responds to misinformation in a different way, the lack of a concerted approach may lead to some degree of confusion among social media users: visitors to a particular website may assume that screening or fact-checking measures have been taken, when in fact they are not, and vice-versa.

The shortcomings of current responses to misinformation in the context of infectious diseases are not insignificant. The COVID-19 provides policymakers with yet another opportunity to pay closer attention to an area in which self-regulation seems to have exhausted its possibilities.