

# Information Battleground: Vaccines

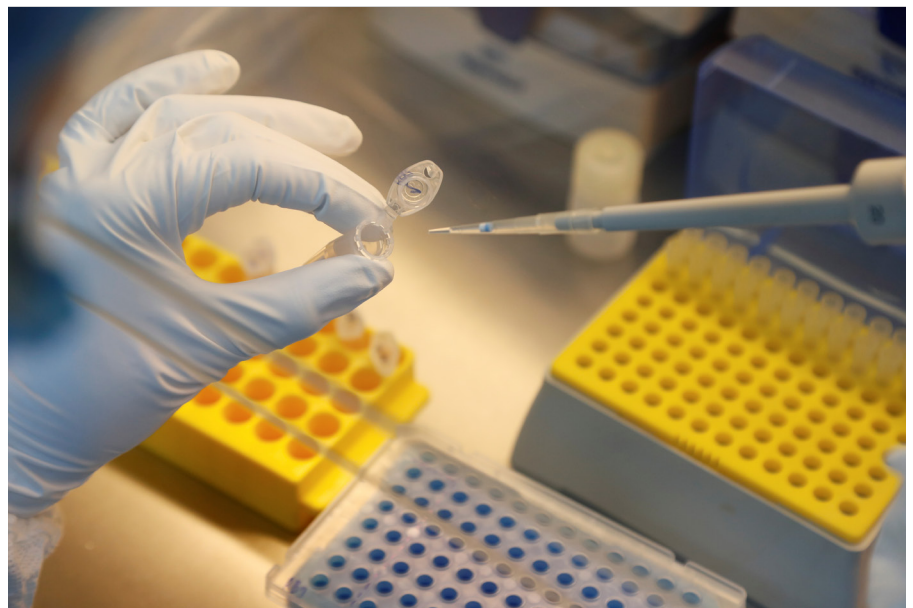
Rapid development of a vaccine has become a new measure of success in fighting coronavirus. More than any previously, this phase of the pandemic will be shaped by information, both positively through new knowledge on vaccines and negatively through influence attempts around their effectiveness and safety.

By Jakob Bund and  
Ann-Sophie Leonard

Following a variety of lockdown measures, governments around the world face high expectations for economic recovery and a return of social life – expectations that heavily rely on the availability of an effective vaccine against COVID-19 infections. Questions around access to an effective vaccine in sufficient quantity have intensified competition and tension, as governments seek to conclude agreements with promising vaccine developers.

This competition threatens to further fuel the use of disinformation around efforts of some governments to manage public expectations; to exploit feelings of fear and uncertainty; to gain an edge in vaccine research; and to favorably shape international opinion about a states' role as a responsible stakeholder. In this context, the EU's High Representative for Foreign Affairs and Security Policy Josep Borrell has warned of a "global battle of narratives", as select governments have actively engaged in disinformation to undermine the credibility of other states. In addition, disinformation on the origin of the coronavirus outbreak, its spread and ways of protecting against it have created conditions for an 'infodemic' that risk undermining official health advice.

In this climate, Russia was the first country to approve a coronavirus vaccine on 11 August. However, the critical third stage of



The development, production and distribution of vaccines is increasingly becoming the focus of disinformation campaigns and geopolitical competition. *Anton Vaganov / Reuters*

clinical trials, which tests preparations on a wider group of volunteers and includes a control group, was only scheduled to begin the day after the approval. Phase three trials provide essential information on the effectiveness and safety of possible vaccines. In reversing the order of vaccine approval and completion of the clinical trials, the world's first approved vaccine has pushed the door wide open for the debate about its effectiveness.

The CEO of the Russian Direct Investment Fund that has financed the vaccine's development also made claims about being the victim of "information attacks" and about external pressure on potential partners not to collaborate. These dynamics put questions around vaccine development, production and distribution at the heart of the three-fold complexity of managing a pandemic amid information challenges and larger competing geopolitical interests.

## Infodemic: A Disease Spreading Online

In continental Europe, Italy was among the countries hit hardest by the coronavirus. The rapid increase in infections, also created **challenges for Italy in the information space**. Using social media and public diplomacy, a coordinated Chinese messaging campaign specifically targeted the Italian audience. Chinese officials and state media highlighted China's supply of masks, while contrasting this support with initially slow-moving and low-key European and US assistance. One possible intention was to **shift the narrative in public opinion** from China being the point of origin of the virus to China as a reliable partner in times of crisis. Surveys from the Italian polling firm SWG indicate a **change of mind**, as in March 2020, 52 per cent of respondents viewed China as "friendly", up from 10 per cent in January.

In March, a claim went viral on social media that **deliberately misconstrued an actual remark** of Bill Gates about "digital certificates" for coronavirus tests as a plan for the mass implantation of trackable microchips during medical or dental injections. Polling information from Yahoo News/YouGov shows that in the US 44 per cent of Republicans believed the fabricated microchip plans to be true. Data gathered by media analysis company Signal records similar falsehoods linked to Gates and the coronavirus as the most prolific conspiracy-theory theme, garnering 1.2 million mentions on social media and TV broadcasts from February to April. **Amplifying pre-existing beliefs** of anti-vaccination activists, such instigated controversy risks affecting human health through attempts to influence views on protective measures and healthcare decisions. Taking advantage of polarized positions on vaccinations is a **low-cost way to circulate disinformation**.

## A Pandemic Wrapped in an Infodemic

The pandemic emerging from China has created new pressure, but also opportunities. From the onset of the crisis, drivers for Chinese efforts included aspirations to conceal the extent of the original outbreak in China and to ensure first-mover advantage on markets for protective equipment. Russia has equally sought to use the crisis as an opportunity to promote its own crisis management equally sought to use the crisis as an opportunity to promote their own crisis management and international assistance, to disparage other states' crisis response efforts, and to sow doubts about the origin of the coronavirus outbreak.

Many of these motivations, which have spurred disinformation attempts during various phases of the coronavirus pandemic, converge on the issue of vaccine development and distribution. Chief among these are ambitions to highlight efforts at providing relief, diminish the actions of others, and ensure individual access to protective goods – with a particular focus at the current stage on promising vaccine candidates.

Vaccines against the coronavirus stand out as an exploitable theme for information operations. Scientific findings on the effectiveness of vaccine candidates remain limited for the time being. Due to the time-sensitive nature of research, progress reports for vaccine candidates are increasingly communicated through press releases rather than traditional medical publications, sidestepping independent expert review processes that vet information before

it reaches a lay audience. In addition, there is a confidential nature of the terms and circumstances of advance purchase agreements and the related correspondence between governments and pharmaceutical companies.

## Little Means Against Infodemics

Fundamentalist skepticism about vaccines and constructed suspicions about collusion between governments and "big pharma", mobilized through comparatively small but well-organized groups, long predate the coronavirus. These groups seek to seize on the above factors to expand their base, independent of any potential efforts by state actors to instrumentalize these groups for ulterior purposes.

Competition between states around the development, acquisition and distribution of vaccines acts as an accelerant for disinformation efforts already observed. Many of these challenges are closely intertwined with the strategic drivers that have fueled disinformation campaigns in the context of the pandemic. Several of these driving forces will gather new momentum with the emergence of vaccines and spur further influence attempts. Such narratives will likely center on advancing governmental access to

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effective vaccines and promoting efforts in fighting the pandemic and providing international assistance, even though such assis-

tance posed potential health risks, as seen with deficient protective equipment donated or sold by certain Chinese suppliers.

These dynamics risk increasing geopolitical tensions which might reduce restraint on more pernicious disinformation tactics seeking to discredit other countries' vaccine development efforts and reservation deals. As long as these circumstances persist, any vaccines that can contain the pandemic to some extent, will show little effectiveness in reducing information operations designed to claim the opposite.

## Vaccines at All Costs

Governments worldwide have mobilized impressive financial support for vaccine development efforts. Organizations receiving these funds consequently have become prominent targets for attempts to illicitly acquire information and knowhow developed at these institutions. Already, a number of cyber-enabled espionage operations have been observed. In May 2020, the US Cybersecurity and Infrastructure Security Agency (CISA) and the UK National Cybersecurity Centre (NCSC) issued a joint alert warning about advanced state-backed actors actively targeting healthcare bodies, pharmaceutical companies, academia, medical research organizations involved in research on coronavirus medicine. In the same month, networks supporting Swiss and UK supercomputers used for coronavirus research were forced into a temporary shutdown in response to intrusions.

An internal report presented to China's Ministry of State Security (MSS) in April warned that global anti-China sentiment stood at levels last seen following the 1989 crackdown of protests at Tiananmen Square. Notably, this assessment predates the enactment of the Hong Kong national security law. This reading of China's international standing emphasizes the opportunity which the vaccine development and distribution can offer to China in a bid to recoup its reputation.

Based on findings by the Federal Bureau of Investigation (FBI), these rising stakes have allegedly driven China to actively work on compromising US healthcare organizations, pharmaceutical companies, and academic institutions conducting essential coronavirus research. The US Department of Justice further substantiated these claims in July, when it unsealed the indictment of two Chinese contractors assessed to be working for the

MSS. Among other charges for cyber-enabled economic espionage against high-value industrial targets across eleven countries, the bill highlights preparations for breaking into the computer networks of companies engaged in the development of coronavirus vaccines, testing technology, and treatments.

Such intrusions may not only search for insights into research, but also for compromising material that could be leveraged in disinformation campaigns. Elements of interest may include interactions between vaccine developers and states potentially being in contrast with public pledges by certain governments. Such seeming contradictions could also be forged and included in a leak of a larger cache of authentic documents.

### Understanding Vulnerabilities

Adding to the quest of managing the pandemic is the growing dimension of information challenges. The impact of disinformation campaigns remains notoriously difficult to assess. A review of recent disinformation operations, nonetheless, points to a few factors that have given influence attempts traction or reduced the costs of conducting these. One aspect is worth exploring in the context of vaccines: the use of already emotionally or politically charged conversations, referred to as primed discourses, through hack-and-leak tactics.

In one of the few existing empirical impact studies, researchers at the University of Pennsylvania's Annenberg Public Policy Center, have shown isolated effects for so-called hack-and-leak operations that sought to take advantage of known contentious issues during the 2016 US presidential campaign. Based on these findings, the strategic publication of illegally obtained excerpts from speeches that Hillary Clinton had delivered behind closed doors shaped the framing of moderator questions during the following presidential debates and, in turn, candidate preferences of the voters watching.

The leaked material assumed this prominence because, without full context, the hand-picked passages appeared to validate concerns that had dominated debates with Clinton's Democratic contender Bernie Sanders during the Democratic primaries, and thus intended to undermine her Democratic base. Researchers at the Annenberg

### Auction Sale Vaccination: Swiss Vaccine Development Efforts Online

Vaccine development and acquisition efforts undertaken in Switzerland focus on the Public Health Task Force "Vaccine Covid-19". The Federal Office of Public Health announced agreements with the US-based biotechnology company Moderna and Swiss-based Molecular Partners for options on future stocks of coronavirus immunizations, up to 4.5 million and 3.2 million doses, respectively. The latter deal **secures Swiss-first access** to doses of the Anti-COVID-19 DARPIn(R) Program – a technology developed at the University of Zurich. Based on recent reports, Moderna plans to manufacture the active pharmaceutical ingredients for its vaccine in Switzerland. This could **extend potential vulnerabilities** to possible hack-and-leak operations and related disinformation campaigns to Switzerland. Organizations that are not only involved in research on vaccine candidates, but also in their production might become attractive targets for attempts to illicitly acquire information and knowhow developed at these institutions as well as confidential details about their interactions with governments. Switzerland's advantage of being home to leading biotechnology companies and excellent scientific research and innovation underlines the **importance of securing the electronic and digital backbone** of these critical institutions and activities. The threat of hack-and-leak operations demonstrates the need to include effective mitigation measures for disinformation in these preparations.

Center describe this shared history as "primed discourses", because they are marked by polarized positions, which offer low-cost opportunities for disinformation attempts to tap into pre-existing sentiments. Through the targeted pushing of

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(presumed or selective) facts fitting into these discourses, disinformation campaigns can seek to purposefully reinforce preconceived notions for their own purposes.

Discussions around vaccines have long been deeply divided (see box p.2). The discourses offer a multitude of disinformation narratives that can be leveraged by state actors even through the introduction of authentic information into already polarized discussions – either by selectively releasing illegally obtained information or by exploiting perceptions that such information was deliberately kept confidential to cover up alleged wrongdoing.

The leaking of internal material, even if illegally acquired, tends to create perceptions of a legitimate public interest to know about the revealed information, and hence for media outlets to report on leaks to inform the public. However, not all leakers fit the description of whistleblowers. As in the case of the hacked Clinton speeches, the ultimate objective of influence operation leaks – to use information to shape views and decisions towards a certain outcome – is fundamentally misaligned with the gen-

eral aspiration of media organizations to impartially inform the public. The presumed authenticity of internal documents or privileged correspondence can further be exploited as a cover to introduce subtle forgeries into a trove of leaked documents.

In this regard, current espionage operations targeting coronavirus vaccines pose concerns beyond possible disruption of sensitive experiments or loss of valuable intellectual property. Possible developments in this vein underline the role of geopolitical interests in espionage against vaccine research that can stoke tensions in their own right.

Switzerland hosts a range of leading research facilities engaged in vaccine development and a number of international initiatives in support of these efforts, including the Vaccine Alliance Gavi that was set up with financial help of the Gates Foundation (see box p.3). Although not necessarily as a direct target of possible future hack-and-leak operations, Switzerland and other neutral countries could become implicated in such operations due to their sponsorship role.

### Storm in a Nesting Doll

It is important to note that, to date, no hack-and-leak operations have been publicly observed in the context of coronavirus vaccines. Any change would, however, mark a significant escalation. As investigative reporting revealed in July 2020, the Central Intelligence Agency (CIA) had received additional authorities in 2018 to engage in hack-and-leak operations without prior presidential approval. In departure from past practice, the Presidential Finding establishing these powers emphasized the

development of the capability as such rather than an overarching strategic objective to be achieved through the use of new authorities.

The presidential order specifically identifies Iran, Russia, China, and North Korea as potential targets for operations under the new rules. Russia and China have been called out for attempting to hack vaccine research, which would also have offered an opportunity to collect compromising material. An inadvertent side effect of the

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naming and shaming of actors engaged in cyberespionage and intellectual property theft is the credibility this public reporting of intrusions could lend to future influence operations. Actors might leak (purportedly) authentic information precisely because breaches of the organizations from where leaked material allegedly originated were made public previously.

The revelation of the CIA's hack-and-leak mandate coincides with a crucial phase. Any perceived normalization of such operations as standard tradecraft might reduce concerns about consequences that could otherwise moderate such kind of malicious activity.

With respect to the wider adoption of hack-and-leak tactics, it is worth recalling that alleged Russian efforts to interfere in the run-up to the 2016 elections in the US find their counterpart in earlier Russian accusations against the US. The polarized atmosphere around the upcoming elections of 2020 has the potential to add an additional layer to disinformation efforts focused on competing narratives. If measures to effectively mitigate the ongoing pandemic are further contested, the relief through vaccines could also end up as potential collateral damage.

Against this background, any attempt at addressing coordinated disinformation campaigns related to vaccines needs to recognize that this pandemic is wrapped in an

infodemic shrouded in geopolitical competition. Defusing disinformation attempts depends on a wholesome understanding of all three dimensions, namely managing a pandemic, increasing information challenges, and geopolitical competition, as well as their interactions.

For more on the security policy implications of the corona crisis, see [CSS core theme page](#).

**Jakob Bund** is Project Lead for Cyberdefense in the Risk and Resilience Team at the Center for Security Studies (CSS) at ETH Zurich.

**Ann-Sophie Leonard** is a Visiting Scholar at the Center for Security Studies (CSS) at ETH Zurich as part of the Mercator Fellowship on International Affairs.