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The Spanish Flu's Longterm Health, Cultural and Historical Effects: Implications for COVID-19 (Essays)

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As Mark Twain famously observed, history may not repeat itself, but it certainly rhymes. In the wake of 2020, people have been looking to the past for insight into the current pandemic, and COVID-19 has drawn comparisons to everything from the bubonic plague of the Middle Ages to the cholera epidemics of the 19th century. But there is one pandemic with a rhyme scheme that is particularly reminiscent of our current situation—the 1918 Spanish Flu.

There are numerous aspects of the 1918 pandemic that strike a similar chord to COVID-19. In contrast to earlier outbreaks like the plague, the Spanish Flu was an epidemic that struck in a modern, globalized world with large urban centres and fast methods of transportation. This allowed for rapid transmission across the globe, much like what has been seen with COVID-19. Additionally, given the 1918 flu's airborne nature and minimal available treatment options, the mainstay of its management was public health policy, an approach also repeated with COVID-19. Indeed, it was the success of lockdowns and social distancing policies during the Spanish Flu that inspired today's public health leaders to enact similar restrictions.⁶

There are many things to be learned from the Spanish Flu that can be applied to modern times, from the disproportional impact of disease on marginalized populations, to the importance of transparency from the government in crisis management—and these themes have again shown their importance in the fight against COVID-19. But one aspect of the Spanish Flu that may be especially relevant to examine after almost three years of COVID-19 is the long-term impact of pandemics. Like coronavirus, the H1N1 virus that caused the 1918 pandemic had long-term health consequences, and its impacts on both society and culture were far-reaching. As society looks towards a future intertwined with COVID-19, lessons may be drawn from the past on what to expect.

Social Trust

Pandemics are synonymous with death, but one casualty of epidemic disease that is less often discussed is trust. With COVID-19 and asymptomatic spread, everyone is a potential carrier, a potential vector to individuals and their families. Many have experienced that feeling early in the pandemic when they'd go grocery shopping and avoid not only physical contact with others, but sometimes even eye contact.

From 1918, there are stories of people avoiding eye contact as well, but even more extreme are tales about people unwilling to take in children whose parents were dying or dead from influenza, about family members avoiding caring for sick siblings, about neighbors not taking food and water to the ill and allowing them to starve to death.³ As William Sardo, an American survivor of the Spanish Flu, recalled: “It kept people apart ... You had no community life, you had no school life, you had no church life, you had nothing ... It destroyed those contacts and destroyed the intimacy that existed amongst people.”²

Historian John M. Barry argues that the reason for this breakdown in trust was largely terror—people had seen how quickly the virus could kill, and the government had failed to reassure the public.³ In the words of Sardo: “You were constantly afraid, you were afraid because you saw so much death around you, you were surrounded by death.”¹⁴ Terror might explain decreased trust during the pandemic, but even following the 1918 flu, a study has found there was a calculable long-term breakdown in social trust that lasted years.¹ After the peak of the pandemic, panic would have been less prevalent, so other factors must have been at play in this long-term decrease in social trust.

The most intuitive reason would simply be that the fear of possible death from social contact remained after the pandemic was over. However, the authors of the study argue that the larger contributing factor may have been the sheer magnitude of the pandemic, and the inability of society to rise to the challenge.¹ There were shortages of doctors and nurses due to the war, and those who did staff the hospitals frequently fell ill and died from influenza. This led to an inability of healthcare facilities to provide adequate care for patients. Additionally, contrary to expectations, scientists were unable to deliver vaccines or treatment for influenza, and in the midst of a war, the authorities often censored the true nature of the pandemic, creating a lack of trust in government and media. “Observing the failure of institutions and society to cope with the crisis... is what, we believe, led to significant and persistent consequences on individual's social trust,”¹ the authors argue.

Whether COVID-19 will also result in long-lasting effects on social trust remains to be seen. In the present, most have felt that mistrust at one point or another, whether with strangers in the elevator or sometimes, even with friends and family. There has certainly been a lack of trust in public health officials and politicians, and studies have found that a mistrust in authority can have its own consequences. Higher trust in government is associated with better adherence to prosocial and health behaviors like self-quarantines and social distancing.⁸ Additionally, trust in vaccine development and the government approval process is associated with increased uptake of vaccines.⁵ Thus, the prevalence of mistrust within a population will likely be directly associated with its success in containing the pandemic. Whether this mistrust in both the authorities and each other will persist into the future as it did with the Spanish Flu likely depends greatly on how the rest of the COVID-19 pandemic unfolds.

Disbelief in Science

With COVID-19, there has been an eruption of new conspiracy theories, from the falsehood that 5G caused the pandemic to the lie that vaccines are gene therapy. The traction that such conspiracy theories have gained belies an underlying distrust of science and the

government, and in this pattern, we can see echoes of the Spanish Flu, which may also point towards the direction in which we may be headed.

During the later decades of the 19th century, scientists had shown that, rather than bad air or bodily imbalances, it was in fact microscopic creatures that caused infectious disease. The discoveries of investigators like Louis Pasteur and Joseph Lister led the medical community to embrace bacteriology, and the importance of laboratory science was acknowledged by both doctors and public health officials. Science was able to deliver antitoxins to cure the symptoms of common bacterial infections, vaccines against pneumonia, and disease-fighting serums containing antibodies. Thus, when the Spanish Flu hit in 1918, it was expected that science would serve as the great defender of the human race, delivering cures and vaccines, as it had begun to do in previous years.¹⁵ However, against a foe like the 1918 influenza virus, science faltered. Investigators were unable to determine the cause of the disease (scientists believed it to be bacterial for years), let alone deliver effective prevention or treatment. The only effective prophylactic measures were those of lockdowns and quarantines—preventing contact with the virus—and if you did become ill, the most physicians could do was offer supportive measures and advise bed rest. The public had been delivered an undesired reminder of the limitations of science at the time, and this disillusionment with science fed into the disorientation of the lost generation in the years following the war.

We have seen similar trends with COVID-19, with some important differences. Although most scientists agree that COVID-19 likely has a natural origin,¹¹ there remains the possibility that it came from a lab, and this idea has both been fed by and contributed to mistrust of scientists. Despite this mistrust, though, due to the progress that has occurred since 1918, science was able to deliver much better on its promise this time around. Antivirals can help curb the progression of disease, antibiotics can treat subsequent bacterial infections, and now, vaccines can help prevent contracting the virus.

But even so, we still see distrust of science rearing its head, with many dismissing the opinions of scientists and public health officials on lockdowns and social distancing measures. A Johns Hopkins survey found that in early April of 2020, roughly a quarter of American adults questioned social distancing policies, and most of these individuals also expressed doubts about the trustworthiness of science.¹³ Even more are questioning the safety and effectiveness of vaccines. The risks associated with COVID-19 are much higher than those with the vaccines, yet the rare long-term side-effects some have observed following vaccination have become a focal point for anti-vaxxers. Additionally, although it was expected that rare breakthrough infections would occur even in vaccinated individuals, people latch onto such unique cases as evidence of the ineffectiveness of vaccines, and more generally, of science.

Distrust of science was certainly present before the pandemic, but COVID-19 has led to increased polarization. When facing crises like pandemics, which have convoluted and difficult-to-trace origins, people tend to turn to simpler, easy-to-grasp explanations—this can make conspiracy theories that dismiss science appealing. Additionally, during lockdowns, people spent large amounts of time on the Internet and social media, outlets that allow for unusually fast amplification and dissemination of fringe ideas. And the cherry on top of the cake of misinformation: right-wing populism. Science has become highly politicized, with anti-science

rhetoric employed by politicians as talking points, used to further divide the public. Many have come to view protesting lockdowns and vaccination as emblematic of identity. Protesting evidence-based guidelines and scientific interventions has somehow become synonymous with fighting against tyranny, elitism, and government overreach. The Spanish Flu has shown us that disaffection with science can influence culture for years. In a similar vein, it's hard to say where the polarized perspectives on science that have emerged during COVID-19 will lead us—but they're certainly not going away anytime soon.

Longterm Symptoms

Although many infections resolve without sequela, COVID-19 has the potential to transform into a long-term disease (commonly called long COVID). This post-COVID condition can cause symptoms in some patients for months after initial infection, the most common manifestations being difficulty breathing, cognitive dysfunction and fatigue—although other less typical symptoms like loss of smell, depression and chest pain have also been noted. This too has parallels in the past. The Spanish influenza had long-term effects in some patients, including fatigue, sleeplessness and, most commonly noted, neurological symptoms¹⁶. Much of the evidence is anecdotal, but the high frequency of such observations has convinced most modern scholars of the Spanish flu's long-term effects.

In Tanzania, the lethargy the 1918 influenza left in its wake has been blamed on the outbreak of a terrible famine,¹⁶ caused by flu survivors too fatigued to plant at the end of 1918. In patients from Italy to France to America, there are records of symptoms like delirium and psychosis³ following attacks of influenza. Karl Menninger, an American psychiatrist, studied links between the 1918 virus and schizophrenia in a now-classic paper, commenting on the “almost unequaled neurotoxicity of influenza.”¹² In Great Britain, recovering influenza patients seemed to suffer from higher rates of depression, neuropathy, and visual decline.⁹ Amongst other neurological symptoms, the Spanish Flu was also linked to sleep disturbance, difficulty coping at work, and increased distraction and dizziness.⁷

Given that the Spanish Flu occurred on the backdrop of World War I, it's difficult to determine the relative contributions of each respective crisis towards the increased observations of mental illness in the years afterwards. Helpful in clarifying this distinction are studies from countries that remained neutral in the war. In Norway, a neutral country, there were epidemiological observations that indicate a seven-fold increase in psychiatric institution admittances in each of the six years following the pandemic, which would imply a link between influenza and mental illness independent of the war.¹⁰

Like long COVID, these lingering neurological symptoms of the 1918 flu would obviously have had detrimental effects on suffering patients for months if not years. But, it's possible that the long-term ramifications of the Spanish Flu's lasting symptoms reach even beyond the individual patient experience, with consequences that have reverberated throughout history.

Historical Ramifications

Following World War I, U.S. President Woodrow Wilson attended a peace conference in Paris and insisted upon an agreement founded on certain principles. He had previously stated that the only path to long-term order following the war would be “a peace without victory,”⁴ and he had been prepared to walk out on talks if his ideals were not respected, declaring, “[W]e’ve got to make peace on the principles laid down and accepted, or not make it at all.”³ But on April 3, in the midst of the conference, Wilson started coughing, suffered from difficulty breathing and developed a high fever—he had contracted the Spanish Flu. Although he recovered, people around him noted a definite change in his persona afterwards. Historian John M. Barry writes that he was observed to tire more easily and lacked his old mental agility.³ Additionally, and perhaps most disturbingly, he had acquired a number of new, strange ideas—for one, that his home was full of French spies.³ After recovering from his illness, Wilson’s chief usher commented that Wilson was never the same.³

While others noted these changes, the President returned to the negotiations and, although he had been prepared to leave the conference mere days earlier in defense of his ideals, yielded to the French much of what he had previously opposed. Germany would have to pay reparations and accept all responsibility for initiating the war, in addition to numerous other demands that historians virtually unanimously agree fostered the chaos and subsequent nationalistic sentiment that would precede Hitler’s rise to power in Germany. Some speculate as to whether Wilson suffered from a stroke that may have altered his personality during the Paris conference—and, of note, there is a known link between influenza and stroke. It is difficult to say whether Wilson’s battle with influenza may have affected his decision making, but what is clear is that Wilson’s capitulation fostered a world order that would shape the events of the 20th century. As people around the world fall ill with coronavirus, including world leaders, and potentially face long COVID symptoms that include cognitive dysfunction, it will be up to future historians to determine whether such long-term historical consequences may occur in the aftermath of COVID-19 as well.

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