

PUTTING PANDEMICS IN PERSPECTIVE:  
ENGLAND AND THE FLU, 1889-1919

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**Abstract**

Authors who examine the Influenza Pandemic of 1918-19 fail to grasp its full context. Placing it alongside the Great War or other diseases only provides a partial construction, dramatically altering the narrative. With these limitations authors make it an exceptional example and model for future influenza pandemics.

A full context involves incorporating the Great War and the Influenza Pandemic of 1889-92. Solely examining England demonstrates the unique experience of one country. Presenting the entire context is vital to comprehending how the public, medical professionals, and government officials perceived and reacted to the flu in the entire period 1889-1919.

This examination shows that the pandemic of 1918-19 was the extreme, and that there are other courses for flu pandemics. It argues that, despite increased mortality, in 1918-19 the general public were not dramatically altered by the event. This illuminates it in an entirely different manner for all involved.

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## Introduction

The influenza outbreak that crossed the globe in 1918 and 1919 caused more deaths than any other pandemic in history, but before the H5N1 “bird flu” reemerged in 2003 as a viable threat most books only mentioned it in passing, relegating to a few sentences an event that claimed anywhere from forty to one hundred million lives worldwide.<sup>1</sup> As bird flu spread directly from birds to humans, a feat thought to be unprecedented, once again the flu seemed important, and people began looking for historical similarities.<sup>2</sup> For a while, at least, the 1918-1919 pandemic made weekly, and sometimes daily, appearances in the media. What had been the project of a few scientists and historians had temporarily gained a wide appeal. The general public was now listening to what history had to say, but were they right in doing so?

Because of these examinations the 1918-19 influenza pandemic became the quintessential influenza pandemic. In this climate laypeople and experts had fallen prey to the temptation of trying to understand the past as a means to predict the future. The public has always had a skewed perception of the flu, but now many

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<sup>1</sup>In some areas the flu appeared in 1920 as well, but for England, and this project, the latter year does not apply.

<sup>2</sup>Some studies have suggested that the 1918 virus was not the product of reassortment, but came directly from an avian source. Robert B. Belshe, “The Origins of Pandemic Influenza - Lessons from the 1918 Virus,” *The New England Journal of Medicine* 353, no. 21 (November 24, 2005): par. 5, <http://content.nejm.org>. Others, however, claim that it is not genetically related to an avian source. Ann H. Reid and Jeffrey K. Taubenberger. “The origin of the 1918 pandemic influenza virus: a continuing enigma,” *Journal of General Virology* (2003), 84: 2285-2292.

scholars equate 1918 flu with 2000s flu. There is a perceived need among these experts to sound a call to action, perhaps because most people still believe the flu is only a common, harmless disease, and are largely unaware that epidemics and pandemics threaten to cause a high death toll. The appearance in humans of H5N1 avian influenza in 1997 caused alarm, but when this danger subsided it lapsed from the public's memory until 2003. Even this "new" and deadly strain of the flu has been around for years. The problem is that the corrective measures of scholars have gone too far. Not only are the circumstances vastly different, but these people also conveniently conceal that biologically these are two entirely different strains. Today the threat comes from H5N1, but in 1918 the strain was H1N1.<sup>3</sup> To excite the public consciousness journalists, medical professionals, and others often cite the 1918-19 pandemic because it is the most dramatic scenario. This isolates it from its context, for even though the world has not dealt with a pandemic in nearly four decades, in the past these were relatively frequent. In Britain there were major influenza outbreaks in 1833, 1847, 1889-2, 1918-19, 1947, 1957-8, and 1968, while the potential for an epidemic existed in 1976 and 1997.

Writing in the late 1980s about the AIDS virus, Elizabeth Fee and Daniel M. Fox confronted the same problems that are found in most writings about flu

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<sup>3</sup>Influenza strains are named after the types of the two sets of protruding proteins on the exterior of the virus. One is the hemagglutinin, signified by the "H," while the other is the neuraminidase, noted by the "N".

pandemics. Before AIDS inspired authors to reexamine the 1918-19 influenza pandemic, these authors made this prescient statement:

wariness about presentism, is probably the most widely shared among those who use historical methods. Presentism means distorting the past by seeing it only from the point of view of our own time, rather than using primary sources to understand how other people organized and interpreted their lives. The AIDS epidemic can tempt historians to venture facile analogies with events in the past even though we know better.<sup>4</sup>

With influenza pandemics, this present-minded concern that sacrifices the past is precisely the issue at stake.

This desire to find historical parallels for influenza pandemics is not new. In 1892 a letter to the editor of *The Times* claimed, “Alarming as the present epidemic is, it would appear that the influenza of 59 years ago was very similar in its ways and as deadly in its effects.”<sup>5</sup> Similar remarks were even made during the momentous pandemic that began in 1918. One writer argued, “There is, however, nothing in the pandemic for which ample historical parallels cannot be found, and every characteristic now reported can be traced in the old records.”<sup>6</sup> Contrasts also appeared within the same pandemic period. In 1892 a commentator stated, “The present epidemic differs considerably from that of two years ago, being more like the old influenza or severe

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<sup>4</sup>Elizabeth Fee and Daniel M. Fox, “Introduction: AIDS, Public Policy, and Historical Inquiry,” in *AIDS: The Burdens of History*, Elizabeth Fee and Daniel M. Fox, ed. (Berkeley: University of California Press, 1988), 4.

<sup>5</sup>Henry D. Jones, *The Times*, January 26, 1892, 6.

<sup>6</sup>“The Mystery of Influenza,” *The Times*, October 28, 1918, 7.

cold, but more infectious.”<sup>7</sup> Because epidemics and pandemics are rare, for the medical community such comparisons were crucial to their understanding and treatment of the disease. Physician and author E. Symes Thompson wrote,

No single generation of medical practitioners can be expected to possess a sufficient range of observation, or to accumulate adequate materials of information on the subject, to enable them to detect the clue by which to treat the intricacies of this inquiry. The past must be scrutinised, and its reflected light brought to our aid; old and new facts when collated, by the harmony which they exhibit, become mutually illustrative, and acquire a value previously unknown.<sup>8</sup>

These comparisons may have been essential for them, but is it prudent for us to do the same?

From 1889 to 1892 England was not alone as the world suffered through several outbreaks of the flu. This was a pandemic, or as contemporaries sometimes stated, a series of epidemics, that gripped imaginations and the media as much, if not more, than the one that followed little more than two decades later. From reading public accounts about this earlier occurrence, one might get the impression that the late nineteenth century outbreak was more intense and that researchers were more active in isolating and controlling the cause of the disease. The structure of the news changed as well, because in the late nineteenth century many articles shared a common thread. They began with updates on the health of society’s notables, followed by news

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<sup>7</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, February 6, 1892, 290.

<sup>8</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), ix.

on various soldiers' barracks, and then information about a few localities. By contrast, in 1918-19 the articles contained more hard facts, such as the weekly death returns and the measures that each locality was taking to combat the disease, such as regulations on public entertainment and school closures. While the late 19<sup>th</sup> century pandemic produced more high profile deaths, news reports focused on who fell ill, not solely on deaths. In both pandemics high profile people were stricken. In the 1918-19 pandemic King Alfonso XIII of Spain, Kaiser Wilhelm II of Germany, George V of England, and David Lloyd George, among others, all fell ill.<sup>9</sup>

There were many lesser outbreaks in the years following 1892, but Britons first experienced the next pandemic when it struck British soldiers in France in April 1918.<sup>10</sup> This first wave of the new pandemic reached England by June 23<sup>rd</sup>, when the first English cases were reported. Less than one year later the country had experienced three unique waves of influenza, each a part of what current researchers believe to be a strain of the virus that was entirely new to people living in 1918. Experts distinguish the pandemic's onset by the marked change in the age pattern of incidence and mortality. As a percentage of the population killed by influenza, the

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<sup>9</sup>Gina Kolata, *Flu* (New York: Farrar, Straus and Giroux, 1999), 5 and A.A. Hoehling, *The Great Epidemic* (Boston: Little, Brown and Company, 1961), 19 and Richard Collier, *The Plague of the Spanish Lady: The Influenza Pandemic of 1918-1919* (New York: Atheneum, 1974), 8.

<sup>10</sup> The actual date of the first cases, both worldwide and in Britain, are disputed. Many authors currently agree that it was first noticed in Western Kansas in early 1918, though Donald Olson argues that there are similarities with the pandemic to cases in New York City in late 1917. Other scholars, principally J.S. Oxford, place it much earlier, because similar symptoms were seen among British troops in France as early as 1916. Contemporary articles in *The Times* seem to agree that a similar type of the disease was experienced earlier.

typical annual flu affected the elderly most, but during 1918 and 1919 those groups in the middle of the age spectrum were hardest hit. However, observers did not realize the full implications of this until the second wave because the first summer wave was mild, with symptoms typically lasting only three days, and seldom proving fatal. The second wave began in the fall of 1918, inflicting most deaths in October and November, and dissipating by early January, 1919. According to contemporary reports, the virus entered the port cities first, traveled to London via railway passengers, and then spread throughout the country. This was the deadliest of the three waves, accounting for almost 65% of all recorded influenza deaths during the pandemic period.<sup>11</sup> Observers remarked on what they *thought* were new signs of the disease, like severe hemorrhaging and patients who turned so blue that observers noted the difficulty in determining if a sufferer was caucasian or black. Autopsies revealed lungs that contained a thick pus that seeped out when squeezed.<sup>12</sup> Kidneys, when cut, secreted “dark red blood... until in a brief space there was a film of blood obscuring everything.”<sup>13</sup> As one might imagine, these sights left a considerable impact

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<sup>11</sup>Great Britain, *Report on the Mortality from Influenza in England and Wales During the Epidemic of 1918-19: Supplement to the Eighty-First Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales* (London: H.M. Stationery Office, 1920), 32.

<sup>12</sup>W.H. Tytler, et. al., “Pathological and Bacteriological Findings in Fatal Cases of Pneumonia During the Influenza Epidemic of October and November, 1918,” in Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 77.

<sup>13</sup>Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 101.

on those close enough to witness them, but this was mainly a few unfortunate doctors. Just as the danger seemed to have passed, in late January 1919 the disease reemerged. Fatalities were higher than in the first wave, but they were substantially lower than the second. The horrific symptoms of the second wave diminished, and the age pattern began to show signs of returning to normal. Oftentimes the effects on the country defied logic. In 1918 the *Manchester Guardian* reported, “The present distribution of the epidemic in Lancashire is rather curious. While Rochdale and Bacup are both suffering severely, the Whitworth Valley, which connects the two towns, is so far free from the disease. Similarly Haslingden, which lies only two miles from Rawtenstall, another centre of infection, is also untouched.”<sup>14</sup> For England and Wales, the official record states that from June 23<sup>rd</sup>, 1918, to May 10<sup>th</sup>, 1919, deaths from influenza or one of its complications totaled 151,446 people, including 10,457 military personnel. In the same study, the compilers estimated that the number was actually closer to 200,000 deaths, and this has been substantiated by more recent articles.<sup>15</sup>

One of the first major secondary pieces written on the Influenza Pandemic of 1918-1919 was *The Great Epidemic* by A.A. Hoehling, published in 1961. This narrative focused mostly on the experiences of the United States and Europe. Hoehling fairly represented the story, even if at times some of the figures were incorrect. For instance, he remarked that the deaths in London comprised “one third

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<sup>14</sup>“The New Influenza,” *Manchester Guardian*, June 24, 1918, 4.

<sup>15</sup>Niall Johnson believes that the number was closer to 225,000. N.P.A.S. Johnson, “The Overshadowed Killer: Influenza in Britain 1918-19” in *The Spanish Influenza Pandemic of 1918-19: New Perspectives*, eds. Howard Phillips and David Killingray (London: Routledge, 2003), 132.

of all the epidemic fatalities in the British Isles.”<sup>16</sup> However, in 1920 the Registrar General published that deaths in London totaled 17,113 for the entire period. This does not even account for one-third of the deaths in England and Wales alone, which were recorded as totaling 151,446.<sup>17</sup> Given these numbers, mortality in London accounted for over 11%, but not much more. In addition, Hoehling seemed focused on only one wave of the pandemic. He described the spring outbreak in the United States, but in the prologue he curiously stated that “The world had never in history been ravaged by a killer that slew so many human beings so quickly, during but a few weeks in autumn.”<sup>18</sup> In the text he describes the situation after the flu, into the 1930s with the search for its biological origins, so this statement that isolates the fall wave is oddly myopic.

In 1974 Richard Collier published *The Plague of the Spanish Lady: The Influenza Pandemic of 1918-1919*. To reconstruct the event, Collier relied heavily on the recollections of survivors without putting much emphasis on describing the general setting or the general history of the pandemic. Collier’s aim was to motivate his contemporaries to get vaccinated, which is apparent in the epilogue: “in Britain alone, in 1967, the purely medical cost of influenza – drugs, doctors’ time and hospital costs – amounted to £15 million. Yet the medical report which publicised this figure also

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<sup>16</sup>Hoehling, 188.

<sup>17</sup>The Registrar General’s dates for the pandemic period were from June 23<sup>rd</sup>, 1918 to May 10<sup>th</sup>, 1919. *Report on the Mortality from Influenza in England and Wales*, 48, 3.

<sup>18</sup>Hoehling, 3.

estimated that if four out of five people had been vaccinated in that year, the total cost could have been cut to £9 million, and, more important by far, many hundreds of lives could have been saved.”<sup>19</sup> Because he chose to structure his book around personal accounts, Collier, like Hoehling, lacks any real argument.

The most definitive book on the Spanish Influenza is Alfred W. Crosby, Jr.’s *Epidemic and Peace, 1918*, written in 1976. One wonders why Crosby and others avoided using the more accurate word “pandemic” in their titles, especially given the appeal of alliteration. It is interesting to note that in 1989 the book was reissued as *America’s Forgotten Pandemic*. Aside from the title and preface, Crosby’s book was practically unchanged in 1989. The source material had not changed, but in 1989 people were looking for another pandemic to compare with the one brought on by AIDS. In his book Crosby took the more manageable but still daunting task of examining mostly the United States, and in this he was rather successful. As the title of the reissue suggested, one of Crosby’s primary intentions was not only to describe the pandemic in the United States, but also to determine why it was forgotten. To this end he offers several theories, including the idea that it affected people on an individual level, that it targeted young people, and that the disease was too rapid for people to comprehend what they were experiencing.<sup>20</sup> Crosby argued that the rapidity of the disease, and its targeting of young, and thus not high profile, people meant that “Spanish influenza had a permanent influence not on the collectivities but on the *atoms*

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<sup>19</sup>Collier, 304.

<sup>20</sup>Alfred W. Crosby, Jr., *Epidemic and Peace, 1918* (Westport, CT: Greenwood Press, 1976), 321-323.

of human society – individuals.’<sup>21</sup> Like Hoehling, though, the title shows that Crosby’s main emphasis was on 1918, not the entire pandemic period.

In 1989 another work on the 1918-19 pandemic came via a Cambridge dissertation from historian Sandra M. Tomkins. Though unpublished, this piece was the first major secondary work to focus entirely on Britain, completed 70 years after the event. Strangely, she too uses the term “epidemic” as opposed to “pandemic,” when the event seems perfectly suited for use of the latter term. In *Britain and the Influenza Epidemic of 1918-19*, Tomkins lays the foundation for arguments that she would repeat in the articles below. Tomkins believes ideas of the pandemic are often obstructed by its exceptionality. She wrote that “the truly remarkable toll of the 1918-19 epidemic came two generations after the last major cholera epidemic of 1866, since which time Britain had remained generally free from widespread epidemic prevalences. The chronological isolation of the 1918-19 epidemic has contributed to the tendency to treat it as an oddity or anachronism.”<sup>22</sup> Tomkins wishes to “explore the impact of the epidemic on British society in 1918-19” within the context of the Great War.<sup>23</sup> She also argues that the medical profession, in an attempt to protect their status, relied heavily on preventive medicine.<sup>24</sup> In the abstract that prefaces her dissertation, she wrote that “The epidemic provoked a crisis of status among members of the medical

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<sup>21</sup>Ibid., 323.

<sup>22</sup>Sandra M. Tomkins, “Britain and the Influenza Epidemic of 1918-19” (PhD diss., Christ’s College, Cambridge, 1989), 4.

<sup>23</sup>Ibid., 7.

<sup>24</sup>Ibid., 69-72.

profession, who refused to acknowledge that it lay beyond the control of preventive medicine.”<sup>25</sup>

In the early 1990s Tomkins published two pieces of her dissertation as articles. In 1992 she wrote an article titled “The Failure of Expertise: Public Health Policy in Britain during the 1918-19 Influenza Epidemic,” which dealt with the medical profession in Britain. This mirrors chapters two through four of her dissertation, particularly chapter four section i, titled “The Epidemic in London.” In this article she argued the British medical profession was one of the least effective among similarly situated countries in its response because British practitioners were interested in protecting their newfound status, and the disease challenged this. Instead of focusing on care, she says, they focused on prevention, which had no promise of working. She wrote,

The real failure of epidemic policy in Britain was medical professionals’ refusal to admit the de facto presence and nature of influenza in 1918. This unwillingness to accept the limitations of medical science mitigated against constructive efforts to deal with the related distress which was the most pressing need. As it was, status-conscious physicians, in their own organizations and as advisors and executives in public health administration, persisted in advocating a policy of prevention which ultimately counselled ignorance. The passive response of British society and institutions during the worst epidemic since the Black Death is accounted for not in spite of, but because of the self-consciously scientific and rational orientation of a well-developed medical profession and public health administration.<sup>26</sup>

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<sup>25</sup>Ibid., Abstract.

<sup>26</sup>Sandra M. Tomkins, “The Failure of Expertise: Public Health Policy in Britain during the 1918-19 Influenza Epidemic,” *Social History of Medicine* Dec. 1992, 5 (3): 445.

This, however, does not reflect the reality of the situation. For one, the British medical profession was not passive.

In 1994, Tomkins wrote another article, titled “Colonial Administration in British Africa during the Influenza Epidemic of 1918-19.” This mirrored chapter five of her dissertation, titled “Colonial Administration.” In this article she argues that the Colonial Office was ineffective, leaving the individual colonies to devise their own means of dealing with the disease. Her conclusion is that “Local administrators proved more sensitive to the threat than did the metropolitan authority.”<sup>27</sup> She argues that in Britain, people were more concerned with prevention, while in the colonies, “On the whole, they directed their efforts more towards relieving distress through the provision of medicines, hospital accommodation, foodstuffs, and health visits.”<sup>28</sup> This is an odd statement given her previous work on Britain, because although domestic authorities were highly concerned with prevention, there was a fair share of discussion about whether prevention was possible, and there was a fair share of action taken to ameliorate the effects of the disease, especially at the local level (a point she makes in her dissertation). This response parallels what she says happened in the colonies, but it is a connection she does not make. In addition, though she praises colonial authorities for adopting measures similar to the rest of the world, those that helped sufferers, she notes that the death rates in colonies were comparable to those in other locations.<sup>29</sup>

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<sup>27</sup>Sandra M. Tomkins, “Colonial Administration in British Africa during the Influenza Epidemic of 1918-19,” *Canadian Journal of African Studies* Vol. 28, No. 1 (1994): 69.

<sup>28</sup>*Ibid.*, 65, 71.

<sup>29</sup>*Ibid.*, 75.

This diminishes her critique of the British medical community: if neither tactic was more successful, then one side should not be faulted more than the other.

In 1991 Don C. Ohadike also tackled a British African colony with his article on the “Diffusion and Physiological Responses to the Influenza Pandemic of 1918-19 in Nigeria.” He traces the course of the disease in Nigeria from its importation from Sierra Leone to the estimated 500,000 dead. At first this appears to be an alarmingly high death rate compared to the estimated 200,000 in Britain, but it only represented 2.7% of the Nigerian people, which was well within the average death rate for this pandemic.<sup>30</sup> The main deficiency with this article is the author’s reliance on theories that were outmoded even at the time of the pandemic. He blames the higher deaths on overcrowding, something Tomkins also did in her article on British Africa.<sup>31</sup> He claims mortality was higher in the cities due to “poor sanitary conditions.”<sup>32</sup> These notions were shown to be false by the end of the pandemic in 1919, while the idea of sanitation was largely disproved by the experience of the 1890s.

In 1992 Fred R. van Hartesveldt edited a book titled *The 1918-1919 Pandemic of Influenza: The Urban Impact in the Western World*. One chapter by van Hartesveldt gave a brief description of the pandemic for setting, then described the

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<sup>30</sup>Don C. Ohadike, “Diffusion and Physiological Responses to the Influenza Pandemic of 1918-19 in Nigeria,” *Social Science of Medicine* vol. 32, no. 12 (1991): 1394, 1393.

<sup>31</sup>Ibid., 1396, and Tomkins, “Colonial Administration in British Africa,” 74.

<sup>32</sup>Ohadike, 1396.

situation in Manchester.<sup>33</sup> He offers no theory why Manchester was so lightly affected; he only points out the reasons why it should not have been so.

In 1994 F.B. Smith wrote an article on the pandemic that began in 1889. He titled it “The Russian Influenza in the United Kingdom, 1889-1894.” One of the curious items about this piece comes from its very title: the author chose the year 1894 as the end of the pandemic. As pandemics are not neat and tidy events with specific dates marking their beginning and end, these years are open for debate. 1892 is a better ending year for this pandemic because although the flu was present after 1892, sometimes causing a high loss of life, people at the time recognized that the pandemic ended in 1892. Further, if one is determining the date simply on loss of life and prevalence of the disease, 1895 would be a better extension to the end year than 1894. In either case, one would have to explain the relative absence of the flu in 1893. Smith argues that the pandemic (though he too uses the word epidemic) left a lasting impact on European society in its cultural forms of expression: “The influenza epidemic accompanied a shift in the existing aesthetic and arts and crafts movements to that expressionist uncertainty, vulnerability, irrationality, and sudden death which pervade *fin de siecle* styles, whether in Belgium, Austria, Switzerland, or Britain.”<sup>34</sup> However, this is an overstatement of the importance of this event, at least in the case of Britain.

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<sup>33</sup>Fred R. van Hartesveldt, “Manchester,” in *The 1918-1919 Pandemic of Influenza: The Urban Impact in the Western World*, ed. Fred R. van Hartesveldt (Lewiston, NY: The Edwin Mellen Press, 1992), 93.

<sup>34</sup>F.B. Smith, “The Russian Influenza in the United Kingdom, 1889-1894,” *Social History of Medicine* vol. 8 (1995): 70.

In 1999 two books were published with the same general topic of describing the search for preserved samples of the influenza virus and the efforts to map its composition and understand its characteristics. American Gina Kolata wrote *Flu*. The first two chapters examine the pandemic and other historic ailments, but the majority of chapters describe the scientific research about this pandemic that occurred afterwards. She first tells how researchers in England isolated the virus in the 1930s, then she details the more recent efforts to find a preserved sample and what studies are being done with these samples. The other book published in 1999 was written by Briton Pete Davies, titled *Catching Cold*. Interestingly, this book was reissued the following year with the more provocative title *The Devil's Flu*. Without an introduction, Davies begins his account by detailing the situation in Hong Kong in 1997 before shifting to the scene in 1918 in his second chapter. In the next chapter he illustrates why present researchers were curious about the nature of the 1918 virus, and then spends the remainder of the book describing the hunt for the virus, as Kolata does. Their focus diverges slightly when Davies focuses three chapters on the failed British and Canadian attempt to find a preserved virus in Norway before he turns to Kolata's focus, the American researchers Ann Reid and Jeffrey Taubenberger.<sup>35</sup> These two books are repetitious. For instance, Kolata has a chapter titled "An Incident in Hong Kong," while Davies has a chapter titled "The Incident in Hong Kong." They are structured differently, as the Kolata chapter falls late in the book, while for Davies the chapter is the lead off for his account. As a scholarly work, the Kolata book fares

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<sup>35</sup>Kolata, on the other hand, spends only one chapter near the end talking about the attempt to find the virus in Norway.

much better. Though she fails to include notes in the body of the text, there are endnotes for each chapter at the back of the book, and an index, both of which are not found in the Davies work. They both, however, try to create suspense based on a present threat.

In 1999 Lynette Iezzoni published *Influenza 1918: The Worst Epidemic in American History*. As a companion to a PBS documentary on the pandemic, this book lacks footnotes and contains only a small bibliography. Though the information contained within is a decent recounting of the Spanish Flu pandemic, the deficiencies noted preclude it from finding a place in the canon of scholarly works on the subject.

Andrea Tanner's article "The Spanish Lady Comes to London: the Influenza Pandemic 1918-1919," published in 2002, is based solely on an examination of London. She argues that in the 1890s the flu was so prevalent that "Its very familiarity meant that it was largely ignored."<sup>36</sup> She states that in 1918 and 1919 the authorities were less proactive than in other countries.<sup>37</sup> Their last major test, she claims, came with a smallpox epidemic that lasted from 1901-1904. In this, officials may have become overconfident: "the metropolitan health authorities believed that they had been tested in a major epidemic and had coped well."<sup>38</sup> However, smallpox and flu are vastly different ailments and experiences. Among the invalid claims she makes is that the pandemic arrested the faith in preventive medicine: "The pandemic undercut the

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<sup>36</sup>Andrea Tanner, "The Spanish Lady Comes to London: the Influenza Pandemic 1918-1919," *London Journal* 27, no. 2 (2002), 53.

<sup>37</sup>*Ibid.*, 58.

<sup>38</sup>*Ibid.*, 62.

commitment to preventive medicine so central to health policy, and demonstrated starkly the limitations of preventative and curative medicine.”<sup>39</sup> She also makes the inaccurate claim that the elderly in 1918 and 1919 possessed an immunity to influenza bestowed from the flu pandemic of 1889-92.<sup>40</sup> In fact, researchers believe the two were entirely distinct viruses.

In 2003 and 2005 Sverre-Erik Mamelund published two intriguing articles on Norway’s experience during the 1918-1919 pandemic. The former, “Spanish Influenza Mortality of Ethnic Minorities in Norway 1918-1919” examines two minorities in Norway, the “Finnish immigrants” and “the indigenous Sami population.” His thesis “is that Sami, who mostly lived in rural and peripheral areas of Northern Norway, had little prior exposure to influenza compared to that of the more urban ethnic Norwegian population living in Southern Norway.”<sup>41</sup> He notes that the mild summer wave of 1918 did not infect the Sami because they lived in remote locales, but when the later waves came they fled to the mountains. However, some Sami were already infected, which meant that some died on the journey or otherwise failed to receive proper care, while the virus continued to spread among the people.<sup>42</sup> This, he argues, shows that they had not acquired even a partial immunity from the influenza that circulated in 1918, nor from the ones that were present from 1915 to 1917, which

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<sup>39</sup>Ibid., 69.

<sup>40</sup>Ibid., 68.

<sup>41</sup>Mamelund, Sverre-Erik, “Spanish Influenza Mortality of Ethnic Minorities in Norway 1918-1919,” *European Journal of Population* 19 (2003): 84.

<sup>42</sup>Ibid., 97-98.

he argues was also detrimental.<sup>43</sup> His other article, “A Socially Neutral Disease? Individual social class, household wealth and mortality from Spanish influenza in two socially contrasting parishes in Kristiania 1918-19,” contradicts most authors, who claim that higher standards of living did not protect people from the flu pandemic. Instead, Mamelund argues that though wealthier people might have had the same chance as others of catching the disease, they had a much higher chance of surviving it.<sup>44</sup> By scientifically examining a middle class and a working class neighborhood in the Norwegian capital, he concludes that the wealthier people may have fared better because they “probably had better chances of taking time off from work to convalesce,” and “Persons with higher education were probably also more likely to retain and follow up the instructions from municipal health authorities than those of less education.”<sup>45</sup>

In 2003 Howard Phillips and David Killingray edited *The Spanish Influenza Pandemic of 1918-19: New Perspectives*. Among the submissions in this anthology is a chapter by N.P.A.S. Johnson (who was then a Cambridge Geography Ph.D. student) titled “The Overshadowed Killer: Influenza in Britain 1918-19.” This is mostly a straightforward summary of the British experience that contains familiar information. What this lacks are any new calculations done by Johnson. For instance, Johnson cites Crosby to support his theory that the war did not increase mortality, but he notes that

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<sup>43</sup>Ibid., 99.

<sup>44</sup>Svenn-Erik Mamelund, “A socially neutral disease? Individual social class, household wealth and mortality from Spanish influenza in two socially contrasting parishes in Kristiania 1918-19,” *Social Science & Medicine* 62 (2006): 924.

<sup>45</sup>Ibid., 928, 931.

“it is extremely difficult if not impossible to separate out the demographic effects of the pandemic from those of the First World War.”<sup>46</sup> In addition, Johnson states his belief that the wealthy suffered in equal proportion to the poor, though he only uses contemporary accounts to support this belief.<sup>47</sup>

In 2004 John Barry published what has become one of the most popular books on the topic of the 1918-19 Pandemic, titled *The Great Influenza*. It is clear why the book was a bestseller, as Barry vividly recounts the experiences of those living at the time, though most of his work deals with the United States. Unfortunately for scholars who wish to send an accurate message about the event, Barry’s book is extremely Whiggish, because it proceeds from the idea that the pandemic illustrates the triumph of modern society. This is a theme emphasized throughout his introduction.

For instance, he states that

In the United States, the story is particularly one of a handful of extraordinary people... These were men and some very few women who, far from being backward, had already developed the fundamental science upon which much of today’s medicine is based. They had already developed vaccines and antitoxins and techniques still in use. They had already pushed, in some cases, close to the edge of knowledge today. In a way, these researchers had spent much of their lives preparing for the confrontation that occurred in 1918.<sup>48</sup>

Statements like this permeate the entire book. In fact, part I is titled “The Warriors,” as if to suggest one side poised to fight the other. In reality, the medical side was unprepared in advance of and experimental during the event, and the other side, the flu

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<sup>46</sup>Johnson, “The Overshadowed Killer,” 141.

<sup>47</sup>Ibid., 142.

<sup>48</sup>John M. Barry, *The Great Influenza* (New York: Viking, 2004), 5.

virus, did not know it was fighting at all. Statements like these help to prove the author's main intent, to show that American medicine emerged triumphant. In actuality, though, there was no way to stop the flu, and over half a million died in the United States. Decades before Barry, Hoehling wrote, "whatever the impetus, the most skilled doctors in the world had not been able to limit the epidemic's duration by so much as one hour, or, so far as definite evidence could show, save the life of one patient who had not already been spared by the angel of death."<sup>49</sup> Barry's agenda detracts from some otherwise good information about the scenes in the streets and biographies of some of the principal players in the United States.

N.P.A.S. Johnson published a book (as Niall Johnson) in 2006 called *Britain and the 1918-19 Influenza Pandemic: A dark epilogue*.<sup>50</sup> As a historical geographer, Johnson's work aims "to uncover more of the story of the pandemic, particularly in Britain, and may be considered an attempt at what Risse terms a 'total history' in examining how the 'environmental, geographical, political, cultural, biological, and medical aspects inextricably' bind together to constitute an epidemic."<sup>51</sup> In doing this, though, Johnson has a present-minded agenda: "This work examines the 1918-19 influenza pandemic and demonstrates how it was one of the most massive disease outbreaks in human history, and how influenza remains a threat.... Given the very real possibility of future flu pandemics, the parallels and portents that can be drawn from

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<sup>49</sup>Hoehling, 4.

<sup>50</sup>Johnson presents the flu pandemic as an "epilogue" to the Great War.

<sup>51</sup>Niall Johnson, *Britain and the 1918-19 Influenza Pandemic: A dark epilogue* (New York: Routledge, 2006), xi.

the 1918 experience, and how they might be played out in a future pandemic, are also discussed.”<sup>52</sup> Johnson regards influenza as an organism competing with humans, and “An evolutionary ‘race’ with a virus is not one humanity is going to win.... This drives us to the rather depressing conclusion that humanity must be prepared for further assaults of influenza.”<sup>53</sup> The account is fairly thorough in many respects, but it lacks a true historical approach. This is primarily found in the preoccupation with the present, which pervades the entire piece and results in some unnecessary discussions. Nowhere is this more apparent than in his final chapter, titled “Possible Futures.” Lacking all but scant conclusions, Johnson uses this section to show what can be done now and what *might* happen in the future. He writes, “Could humankind face the threat of a pandemic such as 1918 again? Further influenza epidemics and pandemics are highly likely.”<sup>54</sup> He also continues to voice his belief that urban centers suffered more, even though he admits pages later that “pandemic influenza mortality returned low correlations with either population or density measures” and that being urban only negligibly raised the numbers.<sup>55</sup> Despite this, his discussion on demographics and the associated maps and tables are a unique and potentially useful part of this work.

Each of these pieces contributes to our understanding of influenza pandemics, but each has its own deficiencies. And with the exception of Mamelund, they essentially tell the same story. In addition to their specific problems, most of the

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<sup>52</sup>Ibid., 2.

<sup>53</sup>Ibid., 36, 35-36.

<sup>54</sup>Ibid., 204.

<sup>55</sup>Ibid., 59, 63.

works share some general problems, too. For one, they narrowly focus on the pandemic that occurred in 1918 and 1919. In some cases, the focus is limited to the fall wave of 1918, because it was the deadliest. However, a full comprehension of any pandemic requires crossing the boundary of time. It may be easier to imagine a pandemic like AIDS, which is continuously in existence, as one whose conception is frequently changing. It is no longer accepted, for instance, that AIDS targets homosexuals. And while some countries now focus on prevention, others are consumed with the notion of management because of the staggering number of infected individuals in those areas. Influenza pandemics may be sporadic, but it is important to recognize that their conception also changes based on the events that precede and occur during them.

Some, like Tomkins and Tanner, present the flu in context with other disease outbreaks, like cholera and smallpox, when it should be in the context of other influenza outbreaks. Not only does the 1918-19 pandemic need to be fully analyzed in its entirety, but it can only be understood if viewed within the context of other influenza pandemics, especially the one that preceded it, which began in 1889. Before 1889 the prospect of victory over disease was a more accurate perception because most people did not yet consider influenza a threat. In 1918, despite its annual reappearances, they were still grappling with the seriousness of the flu because, concerning the control or treatment of the disease, there had been no breakthrough in the meantime. 1918 did not spur people to mass action because it was not the wake-up call; the influenza pandemic that began in 1889 had already filled this role. The

pandemic of 1918-19 did not prove to be a watershed of a positive or negative nature. The push for sanitation did not end. Modern medicine did not emerge triumphant. Researchers did not quit their jobs in frustration. Nor did the pandemic spawn apathy.

Previous authors also argue, as Crosby does, that the pandemic was not remembered. In fact, those who were affected the most never forgot it, while the event was not significant for the majority of the people. Some researchers in Britain made the flu their lifelong enterprise, while some reformers saw in its resurgence the need for more sanitary efforts. The event provided new opportunities to study the rare pandemic form of the disease, and also reaffirmed the importance of such work. As a Ministry of Health (MOH) report stated,

we are too apt to suppose that the campaign has ended in our favour, that we have little more to fear from the typically epidemic diseases and may concentrate against the endemic group. That we have just passed through one of the great sicknesses of history, a plague which within a few months has destroyed more lives than were directly sacrificed in four years of a destructive war, is an experience which should dispel any easy optimism of the kind.<sup>56</sup>

Throughout the later stages of the pandemic *The Times* frequently asserted the need to increase and shift the focus of medical research from afflictions considered more respectable, like diabetes and cardiac disease, to commonplace ailments like fevers.<sup>57</sup> Because findings brought previously held conclusions into question, groups of researchers worked diligently to isolate the culprit of 1918, a feat simultaneously but independently achieved in the United States and Britain in 1933. The pandemic was

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<sup>56</sup>*Report on the Pandemic of Influenza, 1918-19*, 190-1.

<sup>57</sup>“Influenza and its Causes,” *The Times*, December 24, 1918, 24.

recounted in a few memoirs, and stories were occasionally passed on to posterity. Some authors contend that the 1918-19 pandemic shattered activists' optimism over further efforts concerning sanitation and the control of disease, but in England calls for more sanitary measures and human intervention to combat future outbreaks increased after the pandemic subsided. The reason why the pandemic seemed to fade away after the early 1920s, at least in society at large, is that it never really resonated with the British people. The influenza pandemic of 1889-1892, along with regular outbreaks and localized epidemics, demonstrated that large numbers of people could die from the flu. Sometimes, as in the case of the 28-year-old Prince Albert Victor, Duke of Clarence, who died in 1892, fatalities in this early pandemic were both high profile and young. Death from a flu pandemic, then, was not unknown.

Authors also remove the influenza pandemics from their proper historical context. Tomkins, for instance, judges the British medical community against the responses of other nations instead of against the knowledge they possessed at the time. In 1889 four decades had passed since the last major epidemic, while in 1918 it had been a little over two decades, and smaller epidemics occurred in many of the years between the two. As was often remarked in the late 19<sup>th</sup> century, there were few people still alive in 1889 who had experienced the previous major epidemics, which occurred in the 1830s and late 1840s. On the other hand, in 1918 there were many people who had suffered through the previous pandemic or even its intermittent reappearances, which made them more familiar with the disease. Another error often made is the neglect of the correct links between the Great War and the flu pandemic of

1918-19. The physical demands of the war – how transporting troops helped spread disease, or how medical practitioners were in too short supply on domestic fronts – are thoroughly represented, but often authors do not relate how the war was a central part of the construction of the disease, altering its very definition. Without the war, the disease would have altogether different characteristics. A disease that primarily killed healthy young people came at the end of a war that primarily killed young men, muting the former's impact. War was manmade, and thus entirely manageable, while the flu was still an enigma. The former could be avoided, but the latter was out of their hands for the time. A few authors have commented on this, but only within the vacuum of 1918-19. Like the 1918-19 pandemic, these mortality lists also involved the age bracket hardest hit by the flu. Right or wrong, some believed that the war fostered the flu, and thus deaths due to influenza were just an extension of the sacrifices made to the war. In current books about flu pandemics part of these aspects get lost, but a proper understanding of an event can only follow the accurate portrayal of the entire scene. In 1891 *The British Medical Journal* argued, "Some questions of importance in the study of epidemiology are only answerable by the historical method of research – that is, by the careful study and comparison of the published records of previous epidemics with each other, and especially with good descriptions of prevailing ones."<sup>58</sup> Studying the years from 1889 to 1919 provides a more complete picture of what influenza, and two major pandemics associated with it, meant to the people who experienced it. It reveals that though the flu was a constant threat, it was often placed

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<sup>58</sup>"The Influenza Epidemic of 1836-37 and 1889-91," *The British Medical Journal*, May 23, 1891, 1145.

on an equal footing with other diseases, even after the scores of deaths in 1918. It shows a medical community desperate to find answers, which sometimes led people in wrong directions, influencing both short and long term results. And during the war years, it reveals the populace's true priorities. To understand this pandemic, then, it is vital to understand its entire context.

Most of these authors have adopted preconditions based on the conclusions made in the previous historiography of influenza pandemics. The more egregious error is committed by Barry, whose proleptic account presents a triumph that did not happen in the time frame he is working in. Barry wrote,

the influenza pandemic that erupted in 1918 was the first great collision between a natural force and modern science. It was the first great collision between a natural force and a society that included individuals who refused either to submit to that force or to simply call upon divine intervention to save themselves from it, individuals who instead were determined to confront this force directly, with a developing technology and with their minds.<sup>59</sup>

From any responsible historical viewpoint, this is not an accurate description of events, but instead was cooked up in an author's imagination, with lines drawn and people selectively chosen to fit his thesis. In the period from 1889-1919 medical professionals faced a wholly new, utterly perplexing type of a common disease. They attempted to alleviate it and collected remarks about a wide range of potential curatives, but they never found a solution. In the introduction to the 1920 MOH Report, Chief Medical Officer George Newman stated, "the disease simply had its way. It came like a thief in

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<sup>59</sup>Barry, 5.

the night and stole treasure.”<sup>60</sup> Popularly published books are not the only ones at fault; most of the works present some fault in their narrative. Tomkins postulated that the pandemic in Britain showed a medical profession unwilling to accept that they could not deal with a disease that was becoming increasingly unmanageable.<sup>61</sup> But in the MOH report Newman frankly admitted that the precise causative agent could not be determined due to their “limited knowledge of the natural history of the disease, its lack of definition, its protean manifestations, and its liability to numerous complications which tend to confuse the issue for the bacteriologist.”<sup>62</sup> In 1918 and 1919 medical professionals clearly understood that what they were dealing with went beyond their understanding.

The most common problem displayed by works on influenza pandemics is the error of “presentism,” as described above by Fee and Fox. This is often readily apparent, like in the case of Collier, who argues for vaccination, or Kolata and Davies, who base their account around the 1997 avian flu outbreak in Hong Kong. Others released their books when other diseases were on the agenda, like AIDS or H5N1 avian influenza. This is the most dangerous of all the errors made in respect to influenza pandemics, because it threatens to skew our knowledge of these events. Influenza pandemics are unique historical events that occur in unique historical settings. They illuminate the past, but they cannot predict the future, and they cannot shed light on a disease that the world is currently dealing with. If they are used in this

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<sup>60</sup>*Report on the Pandemic of Influenza, 1918-19*, xiv.

<sup>61</sup>Tomkins, “The Failure of Expertise,” 435-54.

<sup>62</sup>*Report on the Pandemic of Influenza, 1918-19*, xii.

manner, not only is the historical account distorted, but present actions become tainted. If there is a future influenza pandemic, the historical record shows that it is far more probable to be less severe than what happened in 1918 and 1919, but what it cannot show us is how severe it possibly could be. These types of historical comparisons, then, are pointless.

Instead, influenza pandemics should be studied to understand how people in the past were affected by them. A proper examination requires the study of a previous influenza pandemic, because equal comparisons can only be made when the diseases are the same. We need to understand what the medical community knew, thought they knew, and what they did not know. This helps us comprehend their actions and methods. A full understanding of this period also demonstrates how the public truly felt about the disease, and how intensity did not significantly alter their responses. A combination of the medical community's choice of actions and the public's perceptions in turn helps explain the government's response.

The 1918-19 influenza pandemic should not be isolated because people at the time did not view it in isolation. The outbreak of the 1890s helped inform people, rightly or wrongly, about their experience in 1918-19, and thus colored their perceptions. The actual numbers of fatalities associated with the pandemics bear more on present understanding and interpretation of the flu than of those people of the past that experienced it. Far more important to understanding their beliefs are the perceptions of how many were dying, and how many were thought to have died.

Comparing influenza pandemics on an equal footing provides a fuller picture of the historical record. Instead of an infrequent mega-killer, the range and scale of influenza epidemics and pandemics varied widely. The numbers could be high, as in 1918 and 1919, but in most other times they were relatively low. The pandemic that struck in 1957-58 infected up to half of the world's population, but though the total population was higher than in 1918 and 1919, the pandemic of the 1950s only killed around one million.<sup>63</sup> The influenza pandemic of 1918-1919 was not the rule; it was the exception. Even more so, when considering individual countries like England, the situation often paled in comparison to the experience of other nations, both developed, like the United States, and especially in developing ones, like India.

Disease acts on an personal level, and post modernists have argued that the individual formulates the disease. In other words, without each person's experience disease would not exist.<sup>64</sup> Still others have claimed that diseases are separate creatures that have their own unique histories.<sup>65</sup> But while it is important to catalog the various symptoms and stories, which may occasionally yield a unique case, disease is actually a collective experience, operating in defiance of the individual. Charles E. Rosenberg argued that "An epidemic, if sufficiently severe, necessarily evokes responses in every

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<sup>63</sup>Christopher W. Potter, "Chronicle of Influenza Pandemics," in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 13.

<sup>64</sup>Charles E. Rosenberg, "Disease and Social Order in America: Perceptions and Expectations," in *AIDS: The Burdens of History*, ed. Elizabeth Fee and Daniel M. Fox (Berkeley: University of California Press, 1988), 13-14.

<sup>65</sup>For a discussion of these authors and others, see J.N. Hays, *The Burdens of Disease: Epidemics and Human Response in Western History* (New Brunswick, New Jersey: Rutgers University Press, 1998), 4.

sector of society.”<sup>66</sup> In another book he describes when a disease is recognized: “in our culture a disease does not exist as a social phenomenon until we agree that it does – until it is named.”<sup>67</sup>

Biologically the influenza virus exists independently of the individual. Unlike some diseases that must be passed from one human to another to exist, the flu has reservoirs in the animal population. This is most notable in birds, where the virus has established a symbiotic relationship, living peacefully in avian intestines without harming host or invader.<sup>68</sup> Some continue to believe that before the virus can cause a pandemic, it must first undergo reassortment, where it passes to an intermediary source, most often thought to be swine, so that its composition can be slightly altered to form an organism more compatible, and thus easier to transmit, to a larger pool of human recipients. However, there is now the competing belief that the virus can pass unaltered from birds to humans, as illustrated with the current H5N1 bird flu threat. Some claim that the virus that infected the world in 1918-19 was a completely new one that came directly from birds without experiencing reassortment.<sup>69</sup> So pandemic

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<sup>66</sup>Charles E. Rosenberg, “Cholera in Nineteenth-Century Europe: A Tool for Social and Economic Analysis,” *Comparative Studies in Society and History* 8, no. 4 (July, 1966), 452.

<sup>67</sup>Charles E. Rosenberg. *Explaining Epidemics and Other Studies in the History of Medicine* (New York: CUP, 1992), 306.

<sup>68</sup>Toshihiro Ito and Yoshihiro Kawaoka, “Avian Influenza,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 126.

<sup>69</sup>Christoph Scholtissek, “Genetic Reassortment of Human Influenza Viruses in Nature,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 120.

influenza may have an animal reservoir where it exists, unaltered in composition, and just as lethal to people. Twentieth century philosopher Ludwig Wittgenstein offers another compelling argument to those who still cling to the idea that diseases exist only in the individual when he makes the case against the validity of private definitions.

Wittgenstein explained,

“What would it be like if human beings shewed no outward signs of pain (did not groan, grimace, etc.)? Then it would be impossible to teach a child the use of the word ‘tooth-ache’.” -Well, let’s assume the child is a genius and itself invents a name for the sensation! -But then, of course, he couldn’t make himself understood when he used the word. -So does he understand the name, without being able to explain its meaning to anyone? -But what does it mean to say that he has ‘named his pain’? -How has he done this naming of pain?! And whatever he did, what was its purpose? -When one says “He gave a name to his sensation” one forgets that a great deal of stage-setting in the language is presupposed if the mere act of naming is to make sense. And when we speak of someone’s having given a name to pain, what is presupposed is the existence of the grammar of the word “pain”; it shews the post where the new word is stationed.<sup>70</sup>

To put it another way, anyone who works within a language can share an experience, and whoever attempts to come up with their own words and definitions that only they can understand is thus speaking nonsense. When viewed solely from an individual perspective, one misses the many varieties of the same disease. To fully understand it, we must collect experiences. In 1891 Dr. Richard Sisley wrote, “the experience of one physician with regard to one epidemic of a disease cannot be sufficient to enable him to judge, from his own observations, of all the possibilities of the disease he is observing, nor to justify him in designating it after one symptom or set of

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<sup>70</sup>Ludwig Wittgenstein, *Philosophical Investigations*, 2<sup>nd</sup> ed., trans. G.E.M. Anscombe (Oxford: Blackwell, 1958), 92e.

symptoms.”<sup>71</sup> Sisley was writing about his disagreement over using many different names during the influenza epidemics that had passed over England, and across the world. Different symptoms might be found in different individuals, but the potential for all existed in the disease itself. Instead, disease symptoms exist as shared experiences, and that is how, lacking more complex scientific tests, we can often determine what disease existed in descriptions of the past.

Pandemics, and more specifically, the two influenza pandemics that struck England in 1889-1892 and 1918-1919, must be scrutinized together as a whole, while illustrating the mechanisms at work on the individual, community, national, and worldwide levels. Not every experience is a English one, but it contributes to the shared pandemic experience, which in turn reflects back on the story described here. For whatever reason, and regardless of the experience, what was reported in England has some degree of importance to the story as a whole.

Presently flu developments in the world outside individual countries are of great importance. Data from flus in other areas help experts to calculate the formula for annual flu vaccines, while in some instances, like in Hong Kong in 1997, experts from around the world united to avert a potential danger. Neither of these forces was in play in the late nineteenth and early twentieth centuries. This means that we must uncover the true sentiment of the time, and the first key to understanding these pandemics is to know what happened to England, and the rest of the world, in the years 1889-1919. A true understanding of the “Spanish Flu” pandemic of 1918-19 can

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<sup>71</sup>Richard Sisley, *Epidemic Influenza: Note on its Origin and Method of Spread* (London: Longmans, Green, and CO., 1891), 2.

only be achieved by examining the whole period of 1889-1919. What emerges in this narrative is a scientific community that diligently, though unsuccessfully, attempted to find an answer in difficult situations; a perplexed medical community that persisted, often through optimistic and continuous experimentation; a government that was cautious but active; and a public that was largely blasé and undaunted by the pandemic environment.

For the most part the flu is a seasonal disease that appears every winter but rarely poses a major threat. As some authors have postulated, perhaps due to this characteristic the flu only rarely captures imaginations, most often when the threat seems highest, and even then it only has a tenuous hold. While the 1918-19 pandemic had the highest mortality of any pandemic in human history, and thus needs to receive more credit than is traditionally given to it, this pandemic should not become the fundamental model for an influenza pandemic. And, arguably, it should not be raised to the level of importance of 20<sup>th</sup> century events like the First World War. Deaths alone do not equal historical importance.

In 1891 Richard Sisley proudly stated that the United Kingdom was at the forefront in the battle against influenza. He said, “Our own writers have made some of the most exact observations on the disease.”<sup>72</sup> There were several people throughout the country who contributed to the discussion of this disease. While I have attempted to present as many of them as possible, this project makes no claims about extending the area of inquiry further than England. It would be too massive of a project to

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<sup>72</sup>Ibid., 37.

attempt to ascertain a clear and accurate representation of two influenza pandemics in all four of the countries that comprised the United Kingdom. Most of the statistics contained herein are solely representative of England and Wales. However, though my focus is on England, I have included voices from the other countries when they were relevant to the discussion at hand. My justification for doing so is this: all of these accounts formed the cumulative knowledge that English doctors drew upon. Just as, in turn, their contributions were used by others. These events were not self-contained.

## Chapter I – England and the Flu 1889-1919

By the late 1880s the threats posed by most major diseases seemed to be waning. A vaccination for smallpox had been available for nearly a century. The sanitary effort of previous decades had stemmed the tide of cholera, one of the most horrific and deadliest diseases of the 19<sup>th</sup> century, so that another scourge was virtually preventable.

Nothing of the sort had been done, or even attempted, for influenza. The English people, or anyone else, for that matter, did not possess an immunity to the flu, nor had any scientist or physician developed a vaccination against it. By all accounts there had been one influenza pandemic, and probably several influenza epidemics, in 19<sup>th</sup> century England. Christopher W. Potter, in the *Textbook of Influenza* (1998), claims that

Two conditions must be satisfied for an outbreak of influenza to be classed as a pandemic. Firstly, the outbreak of infection, arising in a specific geographical area, spreads throughout the world; a high percentage of individuals are infected resulting in increased mortality rates. Secondly, a pandemic is caused by a new influenza A virus subtype, the haemagglutinin (HA) of which is not related to that of influenza viruses circulating immediately before the outbreak, and could not have arisen from those viruses by mutation.<sup>1</sup>

That definition is perfectly suited for modern times, when we have advanced methods for scrutinizing collected data. But it poses some problems when studying the history of these outbreaks. People in the 1890s and 1910s could judge the first criterion, but

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<sup>1</sup>Christopher W. Potter, “Chronicle of Influenza Pandemics,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 3.

they had no means to determine the second. They did, however, use both the terms epidemic and pandemic, though the authors included were not forthcoming in their definitions of the two terms. What seems to be the case from a perusal of all sources is that epidemics were widespread outbreaks in their geographic areas, and pandemics only occurred when there had been successive epidemics over a larger geographic area. In other words, in 1889-90, 1891, and 1892 they recognized epidemics, but taken together in these years 1889-92 they referred to a pandemic. According to the official report, before 1889 there had been epidemics in 1803, 1833, 1837-38, and 1847-48.<sup>2</sup> There had been more than four decades since the last major outbreak, while the “regular” annual visitations had been minimal, with a low loss of life. After 1848, the highest year for deaths from the flu was 1855, when a total of 3,568 people died in England and Wales. But after 1860 there were less than 1,000 deaths each year due to the disease, while in 1884 there were only 72 total influenza deaths in England and Wales. The numbers made it seem that the disease was progressively coming under control, as other diseases were.<sup>3</sup> The reason why influenza had not been addressed was not only due to its infrequency, but also to its physical manifestations. Compared to the diseases mentioned above, influenza was different. Unlike smallpox, influenza rarely showed outward signs of infection, and unlike cholera, influenza was not usually fatal. Things were about to change.

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<sup>2</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 2.

<sup>3</sup>*Ibid.*, 3.

Influenza is a virus made up of Ribonucleic Acid (RNA) that has two primary proteins on its exterior. Once the virus invades the host, one of these proteins, the hemagglutinin, clings to and provides entry into a cell of the invaded body. The host cell then cuts open the virus and it replicates within that cell. After this the augmented virus breaks free via the work of the other major protein, the neuraminidase, allowing the numerically stronger virus to repeat the process in even more cells. The influenza virus is separated into three general and different strains, categorized as “A,” “B,” and “C.” In Influenza A, which produces pandemics in people, researchers have recorded fifteen different types of Haemagglutinin and nine different types of Neuraminidase, but only three and two of these, respectively, were found to infect humans.<sup>4</sup> Typically once an individual has survived an attack, he or she is immune to that form of the virus, but a person does not remain immune to the flu because influenza, like other viruses, frequently mutates. Every season a new mutation of the virus appears. Mutations that slightly change the structure of the virus are examples of antigenic drift, and these types of changes can cause epidemics because the virus has altered itself enough to appear relatively different to the invaded organism’s immune system. These types of visitations cause elevated death rates because the changed virus is different enough to confound a host’s immune defense, and thus bodies are mostly unprepared and unequipped to fend off its advances. However, the real danger comes with antigenic shift, when the virus changes drastically, forming an entirely different and

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<sup>4</sup>Christoph Scholtissek, “Genetic Reassortment of Human Influenza Viruses in Nature,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 120.

new organism, which the potential hosts of the world have never experienced. When these types of viruses infect individuals around the world, the outbreak becomes a pandemic, which often causes a high death rate because they are completely foreign to immune systems. The annual seasonal influenza virus remains relatively the same as it crosses the world (often in the wintertime), but pandemics usually catch authorities completely off guard. Tracing the origins of any flu pandemic is difficult due to the nature of the virus. But because they must have some type of carrier to transmit them, human or animal, the viruses do not appear everywhere simultaneously.

By the late 19<sup>th</sup> century the press had evolved enough to provide somewhat of an advance warning. On the 30<sup>th</sup> of November, 1889, the correspondent in Russia for *The Times* reported the emergence of a new type of influenza in St. Petersburg. Even though he was unfamiliar with the scientific explanation for the changes, the writer could still perceive a difference, saying, “Although it is said that a similar phenomenon occurred some 30 or 40 years ago, nothing so general, so widespread and remarkable as the present disease has ever been experienced here before.”<sup>5</sup> In fact, it had been lingering in parts of the world for some time before this. In its January 4<sup>th</sup>, 1890 issue, the *The British Medical Journal* stated that “The first cases recognised in Europe were observed in St. Petersburg about October 15<sup>th</sup>.”<sup>6</sup> E. Symes Thompson agreed. Writing in 1890, he said “It seems to have been first recognised in Siberia, undoubted cases occurring at Tomsk on October 15<sup>th</sup>. Almost at the same time its appearance

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<sup>5</sup>*The Times*, November 30, 1889, 5.

<sup>6</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 4, 1890, 40.

was announced in the Caucasus, St. Petersburg, Poland, Moscow, Sevastopol, and Merv. In the middle of November it was raging at Berlin.”<sup>7</sup> It may have been present in the world even earlier. In 1891 Dr. Franklin Parsons said,

The origin of the epidemic of 1889-90 is unknown. The earliest recorded occurrences of influenza in that year were in May, in Greenland, in British North America (Athabasca), and at Bokhara, in Central Asia, where it was very prevalent before the middle of July, and from whence it seems to have spread to other parts of the Russian Empire.<sup>8</sup>

Parsons argued that it first appeared in St. Petersburg in September, only to become epidemic in October.<sup>9</sup> It traveled from Bokhara to the Russian capital because “The Russian railway officials and soldiers were equally affected, and as soon as the sufferers became convalescent, they hurried home to Russia for change of air and good nursing. They seem to have taken the infection with them.”<sup>10</sup> Why did so many observers disagree about its commencement? Pinpointing the date and place of origin for an influenza epidemic or pandemic is difficult because influenza is masked by difficulties. Epidemic and pandemic influenza is difficult to track from person to person due to its airborne transmission, and it pops up in seemingly random and unconnected places. In 1889 there was the added difficulty that many people did not

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<sup>7</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), 427.

<sup>8</sup>H. Franklin Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” *The British Medical Journal*, August 8, 1891, 304.

<sup>9</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 9.

<sup>10</sup>*Ibid.*, 14.

recognize the disease. In 1891 Sisley wrote, “It has been afterwards noticed on many occasions that the earliest cases of influenza have for a time escaped recognition.”<sup>11</sup> These early cases are important, though, for as Sisley wrote, “The first droppings of a thunder shower point to a coming storm. The first cases of influenza point to an impending epidemic: but they do more; they produce it by contagion.”<sup>12</sup> But it was still unclear where they originated, even in 1891. Parsons wrote, “we have still to account for its origin. On this point we can do little more than express our ignorance; but it can hardly be said that we are in a much better position as regards other diseases commonly present with us, and generally recognised as communicable.”<sup>13</sup> Despite these attempts to determine its beginning, in 1892 Dr. Julius Althaus admitted, “The origin of influenza is, like that of other specific contagious fevers, such as small-pox, measles, and scarlatina, at present shrouded in obscurity; and the hypotheses which have been brought forward concerning this matter have thus far thrown very little light upon it.”<sup>14</sup>

Other writers began commenting on the disease, but for now it was only a concern of the Russians. With the exception of a letter to the editor of *The Times*

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<sup>11</sup>Richard Sisley, *Epidemic Influenza: Note on its Origin and Method of Spread* (London: Longmans, Green, and CO., 1891), 34.

<sup>12</sup>Sisley, *Epidemic Influenza*, 35.

<sup>13</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 102.

<sup>14</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> ed. (London: Longmans & Co., 1892), 280.

nearly a week later that discussed how nations often named the flus, in general, on countries to the east of them (the Russians called it Chinese, while the Germans called it Russian), no one was really discussing the notion that it could reach the British Isles.<sup>15</sup> However, a flu that has not appeared before, or one that has been absent for a generation or more, spreads relatively quickly because there are so many fresh hosts. On December 9<sup>th</sup>, news appeared that the same disease had reached Germany, while on the 10<sup>th</sup> it was reported in Austria-Hungary. The Vienna correspondent for *The Times* was more cautious than his counterpart in Germany, stating, “It is difficult, however, to verify these accessions, as a general tendency exists at this moment to exaggerate every catarrhal affection into epidemic influenza.”<sup>16</sup> By December 12 it was reported to have reached Paris, though later figures place the outbreak towards the end of November, perhaps on the 26<sup>th</sup> of that month.<sup>17</sup> Paris correspondence in *The British Medical Journal* stated,

Unfortunately for us the Russians are as accurate in their pathological forecasts as the Americans in their meteorological. A few days ago we read in the **Temps** that the Muscovite doctors prophesied that the Russian epidemic of influenza would go the round of Europe. A day or two subsequently the *employés* of the Louvre were seized with it, the military school of St. Cyr followed suit.<sup>18</sup>

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<sup>15</sup>*The Times*, December 5, 1889, 8.

<sup>16</sup>*Ibid.*, December 10, 1889, 10.

<sup>17</sup>*The Times*, December 12, 1889, 5, and “The Epidemic of Influenza,” *The British Medical Journal*, January 4, 1890, 41, and Parsons, *Report on the Influenza Epidemic of 1889-90*, 20.

<sup>18</sup>*The British Medical Journal*, December 21, 1889, 1415.

It was also said to have arrived in Brussels that same day.<sup>19</sup> By this time *The Times* began to take it more seriously, if the concern over an event can be measured by newspaper columns devoted to it. However, the alarm bells were still silent, as an article seemed to discredit the danger posed by the disease, saying, “One still hears of the disease in all directions, and, although it is not generally dangerous... the mortality is certainly much higher than usual.”<sup>20</sup> The same piece mentioned that people in Berlin were simply calling it a “bad cold,” while the Chief Medical Officer of Vienna did not believe it was epidemic influenza, but rather the normal annual version of the disease. Epidemic or not, perhaps there was no real danger at all. On December 7<sup>th</sup> *The British Medical Journal* stated, “The severity of epidemics has varied a good deal, but as a rule, influenza is a mild disease with a low mortality.”<sup>21</sup> On December 13, *The Times* reported a rumor that the disease had appeared in West London, but without any apparent investigation, officials dismissed this as the typical flu.<sup>22</sup> *The British Medical Journal*, on the other hand, said that it had reached England in their December 14<sup>th</sup> issue: “In London and many of the southern and western suburbs there appears to have been during the past week an unusual prevalence of illness, which can only be called

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<sup>19</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 4, 1890, 41.

<sup>20</sup>*The Times*, December 12, 1889, 5.

<sup>21</sup>“Epidemic Influenza,” *The British Medical Journal*, December 7, 1889, 1290.

<sup>22</sup>*The Times*, December 13, 1889, 7.

influenza.”<sup>23</sup> Sisley said that “as early as December 10<sup>th</sup> there was a localised outbreak of the disease amongst the *employés* in a large shop in Westbourne Grove.”<sup>24</sup> But people were still uncertain, on the whole, whether this was the epidemic variety that was spreading across Europe. Sisley argued that “In a city like London the difficulty of finding the date of early cases of a disease is even greater than in” St. Petersburg, Paris, or any of “the largest... continental cities.” This was perhaps because “many of the earlier cases of influenza which were treated privately... will never be reported in any public records.”<sup>25</sup> By December 12<sup>th</sup> the disease was believed to have reached Spain, and by the 17<sup>th</sup> it was in New York.<sup>26</sup> As yet there were no reports of the epidemic version having reached England, though a school in Grantham closed on the 14<sup>th</sup> due to fear that the pupils were falling ill with some variety of the disease, epidemic or not.<sup>27</sup> By the 19<sup>th</sup> it was in Italy and Boston, and by the 21<sup>st</sup> it had reached Portugal. It was spreading throughout the world in typical pandemic fashion, not as a massive tidal wave that engulfed the globe, but more like pock marks on the map, without clear lines connecting the points. One might dismiss this as poor reporting

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<sup>23</sup>“The Epidemic of Influenza,” *The British Medical Journal*, December 14, 1889, 1356.

<sup>24</sup>Sisley, *Epidemic Influenza*, 65.

<sup>25</sup>Ibid.

<sup>26</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 4, 1890, 41.

<sup>27</sup>*The Times*, December 14, 1889, 9.

amongst citizens, health officials, or the media, and while this may have happened (and may happen) to an extent, this sporadic spread seems typical for pandemic influenza.

By all accounts it had still not reached Britain, despite the proximity to continental Europe and the high volume of trade with countries there. Some were certain that Britain would soon be stricken with the disease. On December 21, Dr. Horace Dobell warned, “An epidemic of influenza is so close upon us, that there is little chance we shall escape.”<sup>28</sup> Others were more confident. Days later, one writer remarked on the country’s special character and advanced level of development.

Robert Rawlinson, in a letter to the editor dated December 23<sup>rd</sup>, wrote,

the question is, will it visit England? This can only be answered by results. But let us see if we can find, or manufacture, any reasons why it should not. In the first place, England is isolated by a belt of sea. There are better roads and better cultivated lands than in any similar area of the world, and there has been more money expended on works of a sanitary character in the towns and houses than on any other equal population. If these things have the influence sanitarians preach, the British Isles ought to fare better than the nations of Europe. We must, however, wait and see, as we are not ‘out of the wood.’ My experience teaches me to believe that, if we do not escape, we ought to have the epidemic in a milder form.<sup>29</sup>

Future generations would learn, without a doubt, that all of these explanations did not really matter in the case of the flu, especially given how the disease was transmitted.

So why were they exceedingly confident about their special character in 1889?

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<sup>28</sup>Horace Dobell, “The Epidemic of Influenza,” *The British Medical Journal*, December 21, 1889, 1419.

<sup>29</sup>Robert Rawlinson, *The Times*, December 26, 1889, 11.

In 1889 the flu was a mystery. The germ theory of disease was relatively new. Doctors, scientists, and laypeople did not have a clue about how influenza operated. What they did know about was perhaps the most notorious disease of the 19<sup>th</sup> century, cholera. In mid-century England observers found that cholera was being transmitted through unclean water. With proper sanitation, epidemic outbursts of the disease had been checked. It was therefore through the lens of sanitation that many also viewed influenza outbreaks. The sanitary conditions of different areas were the emphasis of remarks made in the newspapers concerning the progress of the disease. When speaking of the rumor that influenza had invaded Vienna, one writer said, “According to all trustworthy medical reports the sanitary condition of Vienna is excellent.”<sup>30</sup> Concerning Brussels, another remarked, “The sanitary situation is excellent, but isolated cases of influenza are recorded.”<sup>31</sup> If proper sanitation provided protection, the converse showed that supposedly deficient areas harbored the disease. People knew that India was a breeding ground for cholera in the late 19<sup>th</sup> century, but where did the flu come from? In a January 7<sup>th</sup>, 1890 letter to the editor in *The Times*, one man theorized that the disease had its origins in the Honan province of China. Devastating floods produced an unstable and unsanitary situation where, he claims, feces and garbage mixed in the soil and created infectious “spores.” Once dry, the

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<sup>30</sup>*The Times*, December 10, 1889, 5.

<sup>31</sup>*The Times*, December 14, 1889, 5.

wind kicked up the infected dust and spread it around the world.<sup>32</sup> In reference to what the Viennese named the disease, another writer said they referred to it as the “*blitz katarrh* or the Russian disease. The last name indicated the important fact that Russia, by its unhealthy conditions in general, has always been a prolific source of human as well as epizootic disease.”<sup>33</sup>

It would not take long for some of these misconceptions to be debunked, because the coming pandemic added to the collective knowledge and challenged long held ideas about the disease. In 1890 E. Symes Thompson wrote, “Influenza possesses... a special interest, being of all the epidemics the most extensively diffused, and apparently the least liable to essential modification, either by appreciable atmospheric changes, or by hygienic conditions under the control of man.”<sup>34</sup> It is important to remember that, in 1889, though some had theories, the real answers were not yet known. It was unusual, at least to Rawlinson, that his country had, so far, escaped. Eventually pandemics would prove these assumptions wrong. But even Rawlinson and others who believed similarly would later be knocked off their high horses by people like Parsons, who pointed out that if the criteria of hygiene and sanitation truly mattered, then even England might come up short: “It must be admitted that conditions such as those described are by no means confined to Russia,

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<sup>32</sup>R.R., *The Times*, January 7, 1890, 7.

<sup>33</sup>*The Times*, December 12, 1889, 5.

<sup>34</sup>E. Symes Thompson, vii.

but may be found even in villages in this country.”<sup>35</sup> Judged according to traditional safeguards, England was still not protected.

As the disease continued to spread around the world, it also began to increase in severity. Not only were the number of deaths growing, but perhaps more burdensome was the amount of people afflicted. The Paris correspondent claimed, “Not a family in Paris seems to have escaped the disease.”<sup>36</sup> But it was still widely held that epidemic influenza had not reached Britain. Looking back on the setting, Thompson recalled, “For a time, although every one was on the look-out, no cases of influenza were observed, or at any rate identified, in this country, and even at the end of December doubts were entertained as to its presence.”<sup>37</sup> With the flu still prevalent worldwide, the New Year brought little hope. In its December 28<sup>th</sup> edition, *The Spectator* stated,

THERE can be little doubt that the influenza is one of the first gifts which the New Year is going to bestow upon London. ... Whatever the doctors may say – many of them affect to pooh-pooh the complaint, or declare that England will escape – we are bound to catch a disease which has come so near us as Paris, and has taken so firm a hold on the population of that city. ... Five or six times a day, the Dover, Folkestone, Newhaven, and Southampton boats bring hundreds of people who come straight from Paris to England. It is, therefore, almost inconceivable that some one of these will not bring the infection.<sup>38</sup>

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<sup>35</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 103.

<sup>36</sup>*The Times*, December 28, 1889, 3.

<sup>37</sup>E. Symes Thompson, 428.

<sup>38</sup>*The Spectator*, December 28, 1889, 918.

Paris officials reported that excess deaths (the number of deaths above the average recorded) for the month of December, compared to the same month in the previous year, numbered two thousand.<sup>39</sup> What lay ahead for Britain did not look good.

On January 4<sup>th</sup>, 1890, *The Times* gave their first report that “the Russian Influenza has now taken a fair hold upon London,” being especially rife in the East End and present in hospitals throughout the metropole.<sup>40</sup> It was also reported in Dublin at the same time, though it was present in both places earlier than first reported in the press. On that same day, along with reporting it in Westport, Ireland, *The British Medical Journal* also said, “Rumours are afloat as to the presence of the epidemic of influenza in Edinburgh.”<sup>41</sup> Timing was everything; at another season the effects of the disease might not have been as great. “The large diffusion about the end of December,” Parsons claimed, “is probably partly to be attributed to the large number of people who went down from London to spend the Christmas holidays in country places, and who, in a number of instances, are known to have carried the disease with them.”<sup>42</sup> Dr. R. Bruce Low wrote that “At some country houses, where visitors from London and elsewhere were entertained during Christmas week, shortly after the house party was complete, the Influenza began, the general belief being that

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<sup>39</sup>*The Times*, January 3, 1890, 3.

<sup>40</sup>*Ibid.*, January 4, 1890, 9.

<sup>41</sup>“Influenza in Ireland,” *The British Medical Journal*, January 4, 1890, 35 and “The Influenza Epidemic,” *The British Medical Journal*, January 4, 1890, 34.

<sup>42</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 11.

some convalescent from London was the source of the mischief. Several instances were given where visitors to London had returned to their country homes ill with Influenza.”<sup>43</sup> As with the case of Russia, where the disease had been prominent since around September but was not reported on until late November, hindsight showed that in England the disease had been spreading since the end of December.<sup>44</sup> Reflecting later, some readily suggested that the disease had been in their area for a period that extended well before the accepted norm. Manchester’s Medical Officer of Health Dr. John Tatham relayed “that the first cases of influenza are said to have occurred as early as October, but the disease was not very prevalent till the end of the year 1889.”<sup>45</sup> One explanation for why it went unobserved may have been the long absence of the disease from Britain, as “it must be remembered that comparatively few medical men now in active practice can have had any experience of the disease, so that it is highly probable they escaped notice, the symptoms being variously interpreted according to circumstances.”<sup>46</sup> Sisley argued that this, along with new symptoms, might have thrown some off: “Practitioners who had not previously seen the ‘gastric type’ of the disease could hardly be expected to recognise it at first, for the symptoms resembled those which are usually ascribed to catarrh of the bile-ducts, much more

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<sup>43</sup>R. Bruce Low, “Notes on Influenza in Lincolnshire and East Yorkshire,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 258.

<sup>44</sup>*The Times*, April 12, 1890, 14.

<sup>45</sup>*Ibid.*, 78.

<sup>46</sup>E. Symes Thompson, 428.

than those which had been popularly associated with epidemic influenza.”<sup>47</sup> Another reason was that only with hindsight could one know that a pandemic or an epidemic was on the horizon. In the early fall no one was on the lookout. Dr. Parsons had yet another explanation for why, in Britain, it was particularly difficult to determine when it first struck:

It is often not easy to ascertain the date of the commencement of the influenza epidemic in a particular place. Influenza is not one of the diseases which are required by law to be reported to the local authority, nor one of those causes of death which are specially recorded by the Registrar-General in his weekly reports, except in the case of London.<sup>48</sup>

How could there be so much difference of opinion about the start of the epidemic?

Other than the disagreements listed above, some, like Parsons, chose to differentiate between a few cases and a widespread outbreak, giving two separate dates for each.

Geography played another role, since different areas were attacked at different times.

A more specific date could only be set for a smaller geographic area. Parsons explained,

Influenza was prevalent to some extent... in the fortnight before Christmas, but the epidemic began in the last few days of 1889, and the beginning of January 1890. Scattered cases (many of them imported from London or elsewhere), occurred in many places in the middle and end of December. The disease became epidemic in some places in the S.E. of England in the end of December, and generally in the southern, midland, and eastern counties in the first two weeks of January. In the western counties of England and Wales it occurred later in January... Many

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<sup>47</sup>Sisley, *Epidemic Influenza*, 64.

<sup>48</sup>Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution,” 304.

districts in the N. and N.W. of England, in Cheshire, Lancashire, and Cumberland were not attacked by the epidemic till February. ... In some remote places in hilly districts... the disease was not observed till March.<sup>49</sup>

In another article Parsons set the date for the commencement of the epidemic as January 1<sup>st</sup>, 1890.<sup>50</sup> Despite this surety he seemed somewhat perplexed by the nature of the disease. Parsons believed that the disease was spread from person to person, but he also knew that though “There are few places in England, if any, which could not be reached by a traveller from London in 24 hours... the Influenza epidemic did not reach some of the remoter hilly districts in the north and west of England until the first or second week in March, i.e., more than two months after its occurrence in London.”<sup>51</sup> Parsons was not the only one puzzled. The nature of influenza gave some observers the impression that the disease spread more rapidly than it in fact did, as if “whole populations are struck down as it were by a lightning stroke.”<sup>52</sup> This was an old notion. *The British Medical Journal* observed that “The rapidity with which the disease affects one great tract of country after another is so great that Hirsch has been tempted to say of the great pandemics of 1833 and 1837 that many countries were

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<sup>49</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 10-11.

<sup>50</sup>Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution,” 305.

<sup>51</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 71.

<sup>52</sup>Althaus, 308.

‘smitten by the disease as if at one blow’.<sup>53</sup> But even those who had intimately studied the dissemination of the disease might still be confounded by this strange trait. In 1890 Thompson wrote that “The progress of the epidemic did not follow any regular line of march.”<sup>54</sup> One might imagine what kind of impression it would make on people who had *not* studied influenza. A writer for *The British Medical Journal* described this:

Not only is the epidemic rapid in attaining its maximum, but the symptoms are sudden in their onset; the impression which this suddenness has made on the popular mind is evidenced by some of the names which have been applied to it; thus in parts of Germany it has been called *Blitz-catarrh* (lightning cold), and in France *la grippe*, a word derived from, or closely related to, the verb *griper*, which signifies to snatch, and is the equivalent in... our slang ‘to nab’.<sup>55</sup>

Experts then had to contend with this misconception, because it clouded others’ view about the disease. In 1891 Parsons stated, “it cannot be said that there is any evidence that in this country the epidemic has travelled faster than human means of communication could carry it.”<sup>56</sup> Some turned to the historical record for their arguments. Sisley plotted the number of cases of the disease for when they occurred in the year 1782 to show that “In the increase in the number of deaths we see no

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<sup>53</sup>“Epidemic Influenza,” *The British Medical Journal*, December 7, 1889, 1290.

<sup>54</sup>E. Symes Thompson, 427.

<sup>55</sup>“Epidemic Influenza,” *The British Medical Journal*, December 7, 1889, 1290.

<sup>56</sup>Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution,” 305.

‘sudden visitation,’ but a gradual rise to the maximum, and a gradual fall, as in the case of other contagious diseases.”<sup>57</sup> It was his contention that the evidence for contagion had been around for some time.<sup>58</sup> At least by 1892, though, many, like Althaus, accepted that “In London there was, before the recent epidemic at Christmas, 1889, a succession of isolated cases for about three weeks before large masses of the population became affected, and the same observation has been made in the other European capitals.”<sup>59</sup> Parsons explained this by saying, “although the epidemic is often said to burst suddenly, yet on closer inquiry it is usually found to have been preceded by a succession of scattered cases, which may have attracted little notice at the time.”<sup>60</sup>

What hindsight showed, firsthand experience was not as accurate. On January 4<sup>th</sup>, 1890 *The British Medical Journal* stated,

In this country the epidemic has not as yet attained serious proportions, and its presence has been questioned. A consideration of all the information at our disposal, however, leads to the conviction that there has been an epidemic prevalence of influenza in the West of London and in the western suburbs during the last ten days; it has, however, not spread with the rapidity observed in St. Petersburg, Berlin, Vienna, and Paris.<sup>61</sup>

The flu advanced surreptitiously; the epidemic was about to become full blown in Britain.

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<sup>57</sup>Sisley, *Epidemic Influenza*, 46.

<sup>58</sup>*Ibid.*, 40, 46.

<sup>59</sup>Althaus, 308.

<sup>60</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 10.

<sup>61</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 4, 1890, 41.

In a January 11<sup>th</sup> article, *The British Medical Journal* wrote, “The epidemic of influenza has spread with great rapidity throughout the country during the past week.”<sup>62</sup> The disease had now established a strong foothold in various parts of Britain, and its effects were being felt. In Canterbury, a writer referred to the outbreak as a “great inconvenience,” but one wonders if it were not more so in Nottingham, where several railway workers succumbed to the disease, or in Dublin, where more than a few employees of the Guinness brewery were absent from their posts due to the illness.<sup>63</sup> Sisley recorded that “The epidemic was so prevalent in the Docks, and so many Lascars were laid up, that one of the Peninsular and Oriental vessels was fitted up as a hospital for them.”<sup>64</sup> One factory owner doubted whether all this was due to the flu, saying, “I understand that my case is not peculiar in this respect, but that the influenza attacks principally those whose pay does not cease if they are absent for a day or two.”<sup>65</sup> This sentiment was similar to one voiced by Dr. C.J. Evans, of Northampton, who wrote, “I think there is a tendency, among the artisan and labouring classes, at any rate, to magnify the symptoms; certainly there are numerous cases which would not be classed as belonging to the epidemic had they occurred at

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<sup>62</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 11, 1890, 95.

<sup>63</sup>*The Times*, January 6, 1890, 9.

<sup>64</sup>Sisley, *Epidemic Influenza*, 67.

<sup>65</sup>*Ibid.*, January 4, 1890, 11.

any other time than the present.”<sup>66</sup> Industry was one thing, but the loss of members of other professions posed threats more potentially dangerous than a loss of capital. Soon several policemen and soldiers across the country were ill, and in one hospital so many staff members were stricken that an entire ward had to be closed.<sup>67</sup> Infecting so many people, the flu quickly disrupted everyday life, stopping everything from a court session to a football match.<sup>68</sup> By January 10, the General Post Office had 2,030 names on its absentee list.<sup>69</sup> Even though this dramatic number only comprised about one sixth of the total employees,<sup>70</sup> there could be no question now that the country was in the midst of a major epidemic.

Almost as suddenly as it appeared, though, the disease began to abate. On January 16<sup>th</sup>, a writer for *The Times* declared that the disease had peaked, and he was optimistic about the future. The articles began to take up less space in the days before. On January 14<sup>th</sup>, the Post Office was reported to have only 1,566 absentees, a substantial reduction from a few days prior.<sup>71</sup> And though international accounts continued into the Spring, for the most part domestic articles concerning the epidemic ended in *The Times* after January 21<sup>st</sup>, three weeks after it was first reported in

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<sup>66</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 18, 1890, 148.

<sup>67</sup>*The Times*, January 7, 1890, 5.

<sup>68</sup>*Ibid.*, January 7, 1890, 5, and January 9, 1890, 7.

<sup>69</sup>*Ibid.*, January 10, 1890, 10.

<sup>70</sup>*Ibid.*, April 12, 1890, 14.

<sup>71</sup>*Ibid.*, January 15, 1890, 7.

England. The *Manchester Guardian* had already concluded its coverage January 16<sup>th</sup>. By this time the medical press was also boasting of the apparent triumph. An article in *The British Medical Journal* stated,

It is impossible to form any reliable estimate of the proportion of the population which has been attacked, but there can be little doubt that this country has suffered much less severely than Russia, Germany, and France. Whether this is to be attributed to the superior sanitary state of our towns and villages, as Sir Robert Rawlinson supposes, or not it would be premature to decide.<sup>72</sup>

It seemed that the worst was over, though the flu was still present in the country, illustrated by the first line of an article on April 12<sup>th</sup>, which stated, “The epidemic of influenza is rapidly leaving England.”<sup>73</sup> This piece was a long retrospective that discussed several points of the epidemic, including the demographics of who fell ill, and it was the last word in *The Times* concerning this stage of the outbreak.

The threat of influenza would not be absent for long, though, because it reappeared in *The Times* on August 25, 1890, when reports surfaced that it had returned to Vienna. An “epidemic” was not mentioned at this time, but one month later, on September 27, the newspaper reported that a new outbreak was believed to be affecting southern Germany.<sup>74</sup> This news took months to substantiate. On November 12, *The Times* reported that, “The reappearance of influenza in Germany,

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<sup>72</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 25, 1890, 202.

<sup>73</sup>*The Times*, April 12, 1890, 14.

<sup>74</sup>*Ibid.*, September 27, 1890, 5.

which was chronicled some time ago, has now been placed beyond all doubt.”<sup>75</sup> A little over a week later there were reports that it had reached Bordeaux and St. Petersburg, while a few days later its impact on Hungary was discussed. For now it was confined to the Continent – “During the summer and autumn scattered cases of influenza were reported... but there was nothing like a general epidemic.”<sup>76</sup> Though this new epidemic had not yet reached Britain, some could supposedly still feel its influence. In Glasgow in January, 1891, *The British Medical Journal* wrote, “though there are no cases of its occurrence reported, there are not wanting suspicions that in some way its influence on the health of the people is not yet in abeyance.”<sup>77</sup> It was difficult, in fact, for some to determine whether it had really ever left. Parsons said, “There seems to have been a smouldering on of influenza in London and elsewhere through the latter half of 1890. I have knowledge of a local outbreak in one Yorkshire village in December, 1890.”<sup>78</sup> Years later he theorized, “there is no reason to suspect that the disease has never been entirely absent from this country since its appearance late in 1889.”<sup>79</sup> After January 1891 there was a major lapse in the reporting on the

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<sup>75</sup>Ibid., November 12, 1890, 5.

<sup>76</sup>Sisley, *Epidemic Influenza*, 83.

<sup>77</sup>“The Cold Weather, Influenza, and the Death-Rate,” *The British Medical Journal*, January 17, 1891, 140.

<sup>78</sup>Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution,” 307.

<sup>79</sup>H. Franklin Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” in H. Franklin Parsons, *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 1.

epidemic. For the most part, it seems that Britain escaped what was plaguing some parts of Europe in the second half of 1890.

When the stories resumed in March 1891, the focus of attention had been shifted from Europe to the United States, where reports of the disease surfaced from Chicago, Pittsburgh, and Dubuque, Iowa. Most articles were primarily concerned with the astonishing number of funerals, and it was reported that in Chicago during the month of March, approximately 1,200 out of 3,229 deaths were due to influenza.<sup>80</sup> In early April, just as the epidemic appeared to be diminishing in Chicago, it began increasing in New York City. This time there was some suspicion that the disease was coming back to Britain. In Parsons's report, he stated that the disease actually reappeared in late February, becoming epidemic in March.<sup>81</sup> But it was not reported on in the medical or lay press until later. In March *The British Medical Journal* contained this small note, inconspicuously hidden amongst other medical items:

Mr. S. Wellesley Coombs, F.R.C.S.E. (Worcester) writes to say that he has treated recently quite a number of cases – at least eighteen – of illness quite indistinguishable from those occurring during the influenza epidemic of last spring. It would be interesting to know whether this experience is solitary or whether a return of the disease is really amongst us.<sup>82</sup>

On April 14<sup>th</sup>, *The Times* stated that Brooklyn had the highest weekly mortality rate in its history, and in that same edition an article carried the headline “Influenza in

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<sup>80</sup>*The Times*, April 3, 1891, 3.

<sup>81</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 318.

<sup>82</sup>“Influenza,” *The British Medical Journal*, March 14, 1891, 619.

Yorkshire,” even though it had first reappeared in February.<sup>83</sup> On April 18<sup>th</sup>, *The British Medical Journal* reported the disease as present in Sheffield, Drifffield, and Hull.<sup>84</sup> Some theorized that the disease had been carried to Hull by “dirty and destitute” Russian Jews who were traveling to the United States, but this was not so.<sup>85</sup> In 1891 Parsons suggested that it reappeared because it had never left.<sup>86</sup> He reiterated this theory in 1893: “it seems quite as likely to have been due to a local revival of activity of infection already present.”<sup>87</sup> In fact, it was probably carried to Hull by an American ship that docked there.<sup>88</sup> On the issue of origins, it is interesting to note here that even though there were reports that the disease had erupted in the United States, and there were not reports coming from Russia, some still chose to pin the blame on the latter rather than the (probable) former. Towards the end of the month the effects of the epidemic were more prevalent, as the mayor of York had fallen ill, shops and chapels in Lockington were closed, and several businesses in the area were reporting a long list of absentees.<sup>89</sup> People were already noticing differences in

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<sup>83</sup>*The Times*, April 14, 1891, 5 & 9, and May 9, 1891, 12.

<sup>84</sup>“The Influenza Epidemic,” *The British Medical Journal*, April 18, 1891, 871.

<sup>85</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 318.

<sup>86</sup>*Ibid.*, 319.

<sup>87</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 7.

<sup>88</sup>Sisley, *Epidemic Influenza*, 39.

<sup>89</sup>*The Times*, April 23, 1891, 10 and April 16, 1891, 5.

intensity compared with the nature of the disease the year before. In Sheffield, one of the hardest hit locales in Britain during the epidemic of 1891, where a reported one-third were ill, the late April weekly death rate due to all causes was an “extraordinarily high” 57 per 1000, as compared to the highest of 1890, when in March it reached 38 per 1000.<sup>90</sup> The Sheffield correspondent for *The British Medical Journal* wrote,

Influenza continues rife in Sheffield. It is much more widespread than the epidemic last year. It is diffused throughout the whole town, and the neighbouring districts have suffered in a similar manner. Fortunately, though so many have been attacked, the malady has, generally speaking, assumed a milder character than was the case last year, and the consequent uneasiness has been less... it is even asserted that as many as a third of the men engaged at the factories were off work from this cause last week.<sup>91</sup>

But it was not the same in every locale. In London doctors questioned whether the influenza they were dealing with was the same one the city had experienced the year before. Dr. J.W. Hunt said, “I do not feel justified in saying that we have a return of last year’s disease,” while Dr. George Henty said, “there is no epidemic influenza existing in this northern district of London.”<sup>92</sup> Medical professionals may have been hesitant to proclaim the reappearance of the disease due to the experience of the past. Parsons recalled that “The disease in its epidemic form had practically died out at the end of the first quarter of 1890, and as more than 40 years had elapsed since the last

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<sup>90</sup>Ibid., April 28, 1891, 5.

<sup>91</sup>“Increased Prevalence of Influenza,” *The British Medical Journal*, April 25, 1891, 929.

<sup>92</sup>Ibid.

previous similar epidemic occurred, viz., that of 1847-8, it was hoped that some such period might again pass before the country underwent another visitation.”<sup>93</sup> After this bout had waned, Dr. Frank Nicholson of Hull reflected, “As there had been no epidemic in England since 1847, it was a reasonable hope that we might long be spared another visitation, but towards the end of March in this year it was too obvious that we had to face a further epidemic of influenza.”<sup>94</sup> Like the previous visitation, the metropole played an important role in the disease’s dissemination: “In London Influenza began to be epidemic about the end of April 1891, and as before, when London had been invaded, the disease soon became general all over the country.”<sup>95</sup> By the first week of May the disease had spread across England, but *The Times* reported that, “The epidemic... is very far from being of so severe a type as in January of last year.”<sup>96</sup> Cases continued to mount, and in the areas hit the hardest, medical practitioners were utterly overwhelmed.<sup>97</sup> In Leeds the disease was “adding rather seriously to the work of the medical profession in the town.”<sup>98</sup> On May 9<sup>th</sup>, the

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<sup>93</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 6.

<sup>94</sup>Frank Nicholson, “The Complications and Sequelae of Influenza,” *The British Medical Journal*, June 13, 1891, 1273.

<sup>95</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 7.

<sup>96</sup>*The Times*, May 7, 1891, 7.

<sup>97</sup>*Ibid.*, May 9, 1891, 12.

<sup>98</sup>“Increased Prevalence of Influenza,” *The British Medical Journal*, April 25, 1891, 929.

Sheffield correspondent for *The British Medical Journal* reported, “It is asserted in the newspapers that the worst is now over. It would be a pleasant relief if this were so. The epidemic has already lasted longer than did the one last year, but the indications of abatement are not sufficiently evident as yet to make it certain that the scourge is on the wane.”<sup>99</sup> Even as the disease was, in general, subsiding by mid-May in areas such as Yorkshire, it still continued intensely in Birmingham and in London. Britons were experiencing one of the peculiarities of influenza, that “The severity and suddenness of incidence varied much in different villages.”<sup>100</sup> Newspaper articles continued to grow shorter, and by the end of the month daily articles had disappeared. But even in the June 13<sup>th</sup> issue of *The British Medical Journal*, an article noted, “The fatality of influenza in London still continues to be excessive.”<sup>101</sup> By the next week, though, there had been “a marked decline,”<sup>102</sup> and the epidemic “seem[ed] to have subsided about July.”<sup>103</sup> What is interesting was that “This epidemic, i.e., the second of recent years, though very severe in the United States and in the north of England, seems to have spared the continent of Europe to a great extent.”<sup>104</sup>

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<sup>99</sup>“The Influenza Epidemic,” *The British Medical Journal*, May 9, 1891, 1035.

<sup>100</sup>T.B. Franklin Eminson, “Influenza in North Lincolnshire,” *The British Medical Journal*, June 13, 1891, 1276.

<sup>101</sup>“Influenza,” *The British Medical Journal*, June 13, 1891, 1295.

<sup>102</sup>“Influenza,” *The British Medical Journal*, June 20, 1891, 1343.

<sup>103</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 8.

<sup>104</sup>*Ibid.*, 34.

Debates about the nature of influenza continued at long intervals throughout the rest of the year, but on October 31<sup>st</sup>, *The British Medical Journal* reported that “widely separated countries show that there is considerable prevalence [of influenza] in scattered areas,” including in Poland, Russia, France, Australia, and Dundee, Scotland.<sup>105</sup> Dr. Parsons later confirmed this, saying, “The third epidemic in Great Britain seems to have started in October 1891 in two distinct quarters, viz., in Scotland and in the south-west of England, whence it extended southward from the first and eastward from the second.”<sup>106</sup> For Parsons, who believed that the disease remained as a specter, hidden in the places it infected, it had once again reappeared. He wrote, “It would appear that the contagium of the disease, scattered broadcast in the first epidemic, retained its vitality, but in a suspended or inconspicuous form... [from whence] it awoke to renewed life and vigour.”<sup>107</sup> Reflecting a few months later, Dr. H.M. Sampson of Painswick said that the disease had been “prevalent in Gloucestershire so far back as October,” but “towards the latter end of October the disease burst out into a flame.”<sup>108</sup> Over a month before, on December 2<sup>nd</sup> *The Times* broke the startling news that the flu had returned, this time in Edinburgh. But its

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<sup>105</sup>“Reappearance of Epidemic Influenza,” *The British Medical Journal*, October 31, 1891, 957.

<sup>106</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 8.

<sup>107</sup>*Ibid.*, 39.

<sup>108</sup>H.M. Sampson, “The Influenza Epidemic,” *The British Medical Journal*, January 2, 1892, 51.

reintroduction into Edinburgh, as well as the existence of the disease in Leeds, had already been stated in the November 7<sup>th</sup> issue of *The British Medical Journal*.<sup>109</sup> This was the third visitation in two years, which had one columnist bemoaning that “the influenza is more than an epidemic – it is a plague.”<sup>110</sup> It appeared in London in late November, when seven deaths were recorded in one week.<sup>111</sup> After these articles concerning the flu, the topic did not recur in *The Times* until the end of December. But it remained alive in *The British Medical Journal*, which reported on December 5<sup>th</sup> that the disease was epidemic in “the East of Scotland and the West of England.”<sup>112</sup> Although the disease had surfaced in two parts of Britain, they were hopeful that it would not develop into a widespread epidemic. On December 12<sup>th</sup>, they reported that the disease in Edinburgh “show[ed] distinct signs of abatement,” while “the slow rate of progress in contrast to the experience of former epidemics encourages the hope that the circumstances of the present year are less favourable to a widespread prevalence in this country.”<sup>113</sup> This conflicts with what *The Times* reported almost three weeks later, on December 31<sup>st</sup>, 1891: “the influenza in Canterbury has spread with alarming

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<sup>109</sup>“Reappearance of Epidemic Influenza,” *The British Medical Journal*, November 7, 1891, 1002.

<sup>110</sup>*The Times*, December 2, 1891, 7.

<sup>111</sup>“The Influenza Epidemic,” *The British Medical Journal*, November 28, 1891, 1165.

<sup>112</sup>“The Epidemic of Influenza,” *The British Medical Journal*, December 5, 1891, 1231.

<sup>113</sup>“Influenza,” *The British Medical Journal*, December 12, 1891, 1270.

rapidity. Previously the disease was prevalent; but now almost every family is more or less affected.”<sup>114</sup> The flu’s prevalence continued into the new year. In early January one surgeon related to the newspaper his perception: “there was more sickness in Canterbury at the present time than he had ever known.”<sup>115</sup> Like previous outbreaks, this one spread across the country in a patchy manner. For instance, it affected the East Riding of Yorkshire heavily, but not large towns like Leeds that were located relatively nearby. What was peculiar to some was that this third visitation of the 1890s infected less people in London and killed more, but everywhere else it infected more and killed less.<sup>116</sup> But a very similar observation was made in 1919 about the second wave of autumn 1918: “The second epidemic wave probably did not attack so many persons as the first, but it produced severe illness and a higher mortality.”<sup>117</sup> In the report that followed the 1892 epidemic R. Thorne Thorne, Medical Officer of the Local Government Board (LGB), wrote “the rate of death due to Influenza was substantially greater in rural and sparsely populated areas than in large towns.”<sup>118</sup> Parsons produced an explanation for why this happened in 1890: “This seems to be, in

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<sup>114</sup>*The Times*, December 31, 1891, 5.

<sup>115</sup>*Ibid.*, January 7, 1892, 7.

<sup>116</sup>R. Thorne Thorne, “Introduction by the Medical Officer,” in H. Franklin Parsons, *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), viii.

<sup>117</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA” (London, England: MH 10/84, 1919), 1.

<sup>118</sup>R. Thorne Thorne, “Introduction by the Medical Officer,” viii.

part at least, the explanation of the high mortality from Influenza in the agricultural counties, from which many of the younger people emigrate to the towns or manufacturing and mining districts, leaving the old people behind.”<sup>119</sup> But even the use of common logic did not withstand the scrutiny of the compiled statistics. Parson admitted, “On further examination... it does not appear that the difference between the death-rate from Influenza in the agricultural and in the manufacturing and mining counties can be wholly explained by considerations of age and sex-distribution.”<sup>120</sup> In this epidemic Brighton had the highest death rate due to the disease. Their Medical Officer of Health, Dr. Newsholme, argued that this was both because many people traveled to Brighton during the Christmas holiday, and that many ill people went to Brighton to get well. According to Parsons, Newsholme claimed “the large mortality [was due] to the fact that Brighton receives a large number of convalescents from Influenza who form centres of infection.”<sup>121</sup> Parsons was not so sure; he thought that it might have been due to Brighton relatively escaping the 1890 epidemic, which may have increased the severity of the latter epidemics.<sup>122</sup> Once again they failed to find a solution to one of the mysteries of a mysterious ailment. But this peculiarity concerning localities was not new or unique; the experience was different everywhere.

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<sup>119</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 5.

<sup>120</sup>Ibid.

<sup>121</sup>Ibid., 29.

<sup>122</sup>Ibid.

In 1893 Parsons recorded that “Few places in this country appear to have escaped Influenza entirely in the last three years, though a few are said to have been only lightly affected.”<sup>123</sup> In 1890 Sisley had written, “There were exceptions to the rule that towns suffered first.” He gave the example of Churchingford, “which is very scantily populated. Influenza appeared in this retired spot before Christmas 1889.”<sup>124</sup> This would have made that town one of the first to be struck by the epidemic. And in February 1892, *The British Medical Journal* reported, “The comparative freedom of the Yorkshire towns from the epidemic is remarkable.”<sup>125</sup> There were some things that simply could not be made to fit a neat and tidy model.

The disease continued, its ravages unabated. In the rural areas of Northamptonshire, one columnist wrote in early February that “there is scarcely a household in which the disease does not exist.”<sup>126</sup> The situation had become so dire across the globe that the Pope even issued an order that allowed Catholics to forego fasting and to eat meat, even during Lent.<sup>127</sup> On February 6 *The British Medical Journal* stated that “the epidemic appears to be generally subsiding... with the

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<sup>123</sup>Ibid., 57.

<sup>124</sup>Sisley, *Epidemic Influenza*, 81.

<sup>125</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 6, 1892, 287.

<sup>126</sup>*The Times*, February 1, 1892, 10.

<sup>127</sup>Ibid., February 1, 1892, 10.

exception of Norwich, where the epidemic continues to be very prevalent.”<sup>128</sup> From this high point, though, articles began to taper off, and so did the disease, which “could be considered to have been over by the end of February, although no subsequent week has been free from deaths ascribed to Influenza.”<sup>129</sup> Some were hopeful. Writing in April 1892, Althaus made his own prognostication. He began by saying,

Since December, 1889, influenza has always been more or less with us, falling and rising again alternately, but never disappearing altogether... a certain average degree of immunity has been established in the community. In addition to this, a considerable number of aged, weakly, and tubercular persons have been cut off; and I therefore consider further outbreaks of extensive epidemics of grip in the immediate or near future to be highly improbable. While I know it to be unsafe to be a prophet, I would nevertheless venture to predict that the present generation is not likely to witness again such outbreaks of influenza as those of Christmas, 1889, and 1891.<sup>130</sup>

Others were not so optimistic. Parsons wrote, “It is to be feared that the contagion of Influenza must be regarded as still domiciled among us, and that a renewal of its epidemic activity within the next few years is by no means improbable.”<sup>131</sup> *The Spectator* carried the pessimistic statement that “For anything that anybody can tell, ‘influenza’ may recur every year, or twice a year – the last attack was at its height in

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<sup>128</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 13, 1892, 355.

<sup>129</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 10.

<sup>130</sup>Althaus, 312.

<sup>131</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 10.

May – increasing each time in potency until it assumes the proportions of a veritable plague, with an apparent mission to slaughter out all the weak of the community, including a majority of the old.”<sup>132</sup> The fact is that none of them were fortune tellers.

For some, 1893 was a year filled with anxiety over the future. In the previous three years there had been three epidemics of Influenza. Out of a total population of 29,002,525 (1891 census) in England and Wales, there were a total of 4523 deaths ascribed solely to influenza in 1890, 16,686 deaths in 1891, and 15,737 in 1892. This yields a mortality rate of approximately .0155% in 1890, .0575% in 1891, and .054% in 1892, for the entire country.<sup>133</sup> As Parsons pointed out, though, because the waves overlapped – the 1892 epidemic began in late 1891, these figures do not follow each wave. So the numbers for 1891 are actually higher than those experienced solely during the outbreak that occurred in early 1891.<sup>134</sup> Incidence is much more difficult to discern. Because influenza was not a notifiable disease (the government was not notified of each case) it is hard to determine how many people caught it. In 1893 Parsons wrote, “while the more recent epidemics of influenza in London as compared with that of 1890 appear to have shown a diminished incidence, as regards number of

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<sup>132</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>133</sup>Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 31-34.

<sup>134</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 26.

attacks, they have unquestionably caused a greater mortality.”<sup>135</sup> Parsons estimated that in the 1890 wave in London about 25% of the people caught influenza.<sup>136</sup> Historian F.B. Smith estimates that “about one third of the adult populations of England and Ireland” were smitten in the period 1889-1894, though he does not cite where he gets his data from.<sup>137</sup> His number seems low, especially given the above quoted 25% for one wave alone.

In 1893, the atmosphere was foreboding. Parsons wrote, “Influenza seems also to have been recently on the increase in London and the neighbourhood; the deaths ascribed to it in the metropolis in the first 8 weeks of 1893 having been respectively 7, 12, 14, 16, 15, 19, 27 and 35, 41.”<sup>138</sup> But *The Lancet* said, “there is nothing at all approaching the visitation of the past years, nor is it likely to become so severe and extensive again for a generation; that influenza persists in some localities for long periods, or recurs at short intervals, is recognized by authorities, but its pandemic outbursts are relatively infrequent.”<sup>139</sup> Articles did not resume in *The Times* until February 1895. By this time, the people had come to accept the frequent reoccurrence of epidemic influenza. One writer said,

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<sup>135</sup>Ibid., 12.

<sup>136</sup>Parsons, “Report on the Influenza Epidemic of 1889-90,” 110.

<sup>137</sup>F.B. Smith, “The Russian Influenza in the United Kingdom, 1889-1894,” *Social History of Medicine* 8 (1995), 55.

<sup>138</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 10.

<sup>139</sup>*The Times*, January 3, 1893, 3.

It seems only too clear that we must reckon an outbreak of influenza among our regular yearly visitations. For five years the pest has been with us, and it makes its appearance now in nearly as aggravated a form as ever... A doubt remains, however, as to what the future may have in store for us, and whether we are at the beginning or near the end of the epidemic.<sup>140</sup>

Though articles only rarely appeared, one at the end of the month showed that the disease was still strong, stating, “In all parts of the metropolis the doctors are attending to an unprecedented number of cases.”<sup>141</sup> As far as epidemics, though, the country was now free, and it would remain so for decades.

Most marked the end of the pandemic with the year 1892, and while current author F.B. Smith claims that the true end came in 1894, the disease did not stop, even after 1895. Certainly the era of this pandemic ended, but the flu continued its regular annual visitations. In 1918 the LGB reminded readers that “Since [1892] Influenza has continued to be returned as a common cause of death each year, the lowest number of deaths returned under this heading in any year being 3,753 in 1896 and 4,334 in 1911, as compared with 12,417 in 1899, 16,245 in 1900, 10,112 in 1908 and 10,471 in 1915.”<sup>142</sup> In some years between the two pandemics it reached epidemic form, causing an unusually high number of fatalities. In 1891, for instance, the number of deaths recorded as due to influenza were 16,686, while the above statement shows

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<sup>140</sup>Ibid., February 25, 1895, 9.

<sup>141</sup>Ibid., February 28, 1895, 3.

<sup>142</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 2.

that the number for 1900 was 16,245.<sup>143</sup> In *The Lancet*, Sir Arthur Newsholme showed that after 1892 there were epidemics in 1893, 1895, 1898, 1899, 1900, 1902, 1906-7, 1908, 1909, 1913, 1915, and 1916-17.<sup>144</sup> With this type of frequency and this high level of fatalities, the flu was never really absent from the country, especially when compared to the later 19<sup>th</sup> century. As the 1920 Ministry of Health (MOH) report stated, “the position lost in 1890 has never been regained... such phrases as the return of influenza, the reimportation of influenza, etc., are mere figures of speech; we have never lost it again since 1889.”<sup>145</sup> But this does not mean that anyone was prepared for what would happen next.

Newspaper articles were not published about the flu that hit the British army in France in the Spring of 1918. Instead, the first articles appeared with the first appearance of influenza domestically, in late June 1918. However, this does not mean that information was actively censored, either by the government or the publishers themselves. Diseases among soldiers in times of war were not uncommon. And even rare or unusual diseases might go unnoticed by the public at large. In 1917, for instance, doctors came across a peculiar ailment that they could not characterize, and gave it the name “purulent bronchitis.” Some modern day researchers think there might be a link to purulent bronchitis and the influenza pandemic, but in 1917 there

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<sup>143</sup>Ibid., 2.

<sup>144</sup>Sir Arthur Newsholme, “Introductory Remarks on Epidemic Catarrhs and Influenza,” *The Lancet*, November 23, 1918, 691.

<sup>145</sup>*Report on the Pandemic of Influenza, 1918-19*. 20.

was no outbreak of purulent bronchitis among the public. An unremarkable flu would be similarly unimportant. In 1891 Parsons blamed the discrepancies of dating the course of the epidemic on the press, saying, “The occurrence of Influenza in foreign and remote places is not likely to be reported through newspapers until it has attained an extensive development, and therefore it is probable that the first cases of the disease may have taken place at dates earlier than those given.”<sup>146</sup> This same reasoning operated in 1918. In addition, the disease was not always called the flu. The British army report about the flu among soldiers in France admitted that sometimes influenza was termed a “common cold” or “Pyrexia of Unknown Origin (P.U.O.).”<sup>147</sup> In the second to last week of May, 1918, there were a total of 11,001 hospital admissions due to influenza or P.U.O., with a similar amount in the following week. From here it rose until, for the week ending June 29, there were a total of 46,275 admissions due to the disease.<sup>148</sup> While the May statistics might seem alarming, it was clearly the June appearance that made the stronger impact. And though admissions were high, deaths remained low. Deaths in army hospitals in France due to all diseases totaled 504 for January, 1918, but only 351 for April, 423 for May, and 532 for June.<sup>149</sup> This means that even in June, when the epidemic was much worse, deaths (even including the

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<sup>146</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 10.

<sup>147</sup>Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 8.

<sup>148</sup>*Ibid.*, 10.

<sup>149</sup>*Ibid.*, 9.

erroneous assumption that they were all due to the flu in June) only comprised .4% of the total hospital admissions. It would not be a stretch, then, to say that newspapers did not find enough significance to report this even if they had wanted to. There simply were not enough people dying to cause alarm.

When the next pandemic, which would cause the most loss of life of any in recorded history, arrived in Britain it burst forth with little fanfare when it appeared in *The Times* on June 18<sup>th</sup>, 1918. An article merely said that a sale of wounded soldiers' crafts, set for the next day, would have to be postponed because of the flu.<sup>150</sup> Even though it had yet to affect Britain's civilian population, soldiers had been grappling with the disease since at least April of the same year. No one knew where the disease came from, though many added the word Spanish as a prefix, referencing the perceived origins of the time. Many now trace it back to Kansas in March 1918, though at least one author has suggested New York in December 1917, while others still hold that it was first present in Europe years before.<sup>151</sup> Some believe it (as well as all other influenza pandemics) began in China, but it was recently stated that "it is possible that this virus originated in Asia and spread to North America before it

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<sup>150</sup>*The Times*, June 18, 1918, 3.

<sup>151</sup>Donald R. Olson, et. al. "Epidemiological evidence of an early wave of the 1918 influenza pandemic in New York City," *Proceedings of the National Academy of Sciences of the United States of America* Volume 102, No. 31 (August 2, 2005): 11059-11063. See also the works of J.S. Oxford.

acquired the property of high lethality in humans.”<sup>152</sup> Although the term “Spanish Influenza” has persisted to this day, many people in 1918 did not believe that it actually had Spanish origins. On June 25<sup>th</sup>, 1918, at the beginning of the first wave, a writer in *The Times* made some statements about this. He said,

Everybody thinks of it as the ‘Spanish’ influenza to-day. The man in the street, having been taught by that *plagosus orbilius*, war, to take a keener interest in foreign affairs, discussed the news of the epidemic which spread with such surprising rapidity through Spain a few weeks ago, and cheerfully anticipated its arrival here. He is sometimes inclined to believe it is really a form of pro-German influenza – the ‘unseen hand’ is popularly supposed to be carrying test tubes containing cultures of all the bacilli known to science, and many as yet unknown. In 1889-90, however, it was the ‘Russian’ influenza, because in those far-off days Russia was a land of melodramatic mysteries for most of us, and, therefore, the likeliest birthplace of a swift and strange disease, ‘the ghost of the Plague,’ as it was imaginatively defined.<sup>153</sup>

If people in 1918 were truly looking for a predecessor of the disease they could have turned to the United States, but instead they chose Spain. There are a few possibilities for this. For one, the United States first experienced the disease in March, which was months prior to England’s June outbreak, while people were mostly unaware of the April outbreak among troops in Europe, for reasons discussed above. This means that they could not make the linear connections between the different places on the map and the progression of the disease. And following a course that modern researchers and writers still bicker about, it did not adhere to the traditional east to west course of

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<sup>152</sup>Robert G. Webster and William J. Bean, “Evolution and Ecology of Influenza Viruses: Interspecies Transmission,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 113.

<sup>153</sup>*The Times*, June 25, 1918, 9.

the disease that people in 1918 were familiar with. Nor did it follow one writer's revised course. Noting that the disease "was first reported in Spain," he said,

The war has, however, fundamentally changed the general character of European traffic – that from east to west being suspended, while the north and south traffic has been greatly augmented; and in the absence of other definable factors it is reasonable to assume that the abnormal progression of the present epidemic has mainly been determined by the changed lines of intercommunication.<sup>154</sup>

With so much business between Europe and Britain, this author seemed to believe that the disease, beginning in Spain, must have traveled north to France and further north to England. Names are given in the early, speculative stages of a pandemic, and their grasp remains firm throughout, even when confronted with conflicting evidence. In any case, even if the disease had first been reported in England, and probably even France (and if it had happened before August 1914, then Germany), it would have been highly unlikely that the influenza pandemic would have had the names of any of these countries preceding it. This may also provide the explanation for why the United States was not seen as the origin of the pandemic. Regardless of its true origin(s), this was the first of three successive waves in the next pandemic.<sup>155</sup>

The summer wave was so different from the winter, and especially the autumn, wave that it is difficult to group all of them together. Like the outbreak that first

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<sup>154</sup>*The Times*, October 14, 1918, 5.

<sup>155</sup>For England, the waves came in the summer of 1918 (roughly late June and July), the autumn of 1918 (essentially October and November), and the winter and spring of 1919 (late January through March or April). Due to the nature of the disease, precise start and stop dates are unavailable.

struck nearly thirty years before, this initial wave was milder, with a fairly high incidence rate but few fatalities. Given this, and the fact that samples from the first or third wave, if they exist, have not been compared to those taken from victims of the second wave, it may make more sense to use the terminology commonly employed in the 1890s of successive epidemics. There was, however, one thing that tied each of these attacks, and even ones that occurred in previous months, together, and that was the high mortality rates among young adults. But even this was not new, for though its extent may have been greater in 1918-1919, it had happened in the 1890s.

However, facts like these were for the statisticians to discover later, for this peculiarity was lost on those experiencing the event at the time. An article that appeared in *The Times* on July 2<sup>nd</sup>, 1918, said that the disease was much milder than the “Russian” influenza of the 1890s, and that the current form was primarily “only dangerous to those of advanced age.”<sup>156</sup> A little over a week in, though, the disease became difficult to deal with, as cases, and fatalities, began to mount. With teachers and students ill, schools began to close. Chemists began to run out of the most popular preventives, cinnamon and quinine. One chemist called the absence of such medicinals “horrific.”<sup>157</sup> According to the Registrar-General, influenza deaths in London totaled 93 for the week that ended on June 29<sup>th</sup>, crested at 279 on the week ending on July 13<sup>th</sup>, and

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<sup>156</sup>*The Times*, July 2, 1918, 3.

<sup>157</sup>*Ibid.*, July 6, 1918, 3.

dropped to 165 the next week.<sup>158</sup> Sir Christopher Andrewes, the British researcher who discovered the virus of the flu, fell ill in this first wave of the 1918-1919 pandemic. In his diary for July 11, 1918, he wrote “Started Influenza.” He spent the following day entirely in bed, and though he does not give a date for his recovery, by July 22<sup>nd</sup> he was able to write, “Did some shopping.”<sup>159</sup> Compared to what would come in the fall, this outbreak was relatively short and relatively mild.

The epidemic continued into the first week of July, but it wasn't until September 12<sup>th</sup> that it was reported the disease had resurfaced, at least in Britain, in Haverstock Hill.<sup>160</sup> By early October there were reports of the disease in South Africa, Germany, Spain, and Sweden, but with the exception of two articles in the interim, nothing was mentioned about Britain until October 9<sup>th</sup>, when the disease was said to be “raging” in Glasgow, where there were several deaths and school closures.<sup>161</sup> In that week (the week before the 16<sup>th</sup>) there were 310 influenza deaths in Glasgow, most notably, according to one article, in children under the age of 5.<sup>162</sup> In the week that ended on October 19<sup>th</sup> London had 519 influenza deaths, a jump from 110 the week

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<sup>158</sup>Great Britain, *Report on the Mortality from Influenza in England and Wales During the Epidemic of 1918-19: Supplement to the Eighty-First Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales* (London: H.M. Stationery Office, 1920), 48.

<sup>159</sup>Wellcome Library, “Diaries of Sir Christopher Andrewes,” (London, England: GC 168).

<sup>160</sup>*The Times*, September 12, 1918, 3.

<sup>161</sup>*Ibid.*, October 9, 1918, 3.

<sup>162</sup>*Report on the Mortality from Influenza in England and Wales*, 49.

before.<sup>163</sup> Day after day there were more school closures across the country, and more and more workers, including essential ones like policemen and firemen, augmented the sick list. By October 29, London had 1,410 policemen and 117 firemen on the sick list.<sup>164</sup> Deaths began to mount. At Enfield, undertakers were so overwhelmed that they stopped taking new cases, while their counterparts in Woolwich cancelled all funerals.<sup>165</sup> By early November *The Times* was ready to declare that the epidemic was abating, but they urged caution in this, reminding readers that precautionary measures should remain in full force.<sup>166</sup> The rest of the country did not uniformly share this experience, though. If influenza was truly declining, the effects of this development were not noticeable, as an article in mid-November stated, “The gradual abatement of the ‘influenza’ epidemic has not yet been reflected in a reduction in the death-roll, according to the latest figures available.”<sup>167</sup> And though an article on November 21, located near the front of the paper, on page 3, carried the headline “‘Influenza’ Abating,” there were no real reports that this was the case. In fact, into December across the country the disease was spreading, as unevenly and randomly as when it began. The flu lingered into January, but by mid-December it was clearly declining throughout Britain, with death figures that supported this observation. Newspaper

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<sup>163</sup>*The Times*, October 17, 1918, 3.

<sup>164</sup>*Ibid.*, October 29, 1918, 7.

<sup>165</sup>*Ibid.*, October 31, 1918, 7.

<sup>166</sup>*Ibid.*, November 1, 1918, 7.

<sup>167</sup>*Ibid.*, November 14, 1918, 3.

articles also tapered off, no longer providing updates, instead turning their attention to reflections on what had happened, and what this meant for the future.

Though the occasional death still warranted an article, by early January life was returning to a state of pre-epidemic normality, if the flu had really changed it that much in the first place. After all, what were a few more restrictions during, and on the heels of, a major war? On January 7<sup>th</sup>, *The Times* heralded the return of students to Blackpool schools, which had been closed for nine weeks.<sup>168</sup> But there were ominous signs across the world showing that the disease could flare up again, with reports in early January of outbreaks in Italy, Samoa, Fiji, and an island off of the western coast of Ireland. These were followed by stories from Copenhagen and Iceland, and finally, on January 24<sup>th</sup>, the disturbing news that the Australian quarantines had been breached, as the disease reached Melbourne, and days later, Sydney.<sup>169</sup>

By January 31<sup>st</sup> *The Times* was already predicting a new wave, though some had suggested this previously, with the statement that, “Indications point to a fresh wave of the influenza epidemic.”<sup>170</sup> The notion that there would be three waves had a precedent in the 1890s pandemic. But even before this occurred, in 1891 *The British Medical Journal* carried this statement: “A curious point, however, is that the disease, it appears, tends to recur at long intervals, each recurrence consisting of two, or

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<sup>168</sup>Ibid., January 7, 1919, 5.

<sup>169</sup>Ibid., January 15, 1919, 7; January 24, 1919, 8, 7; January 29, 1919, 8.

<sup>170</sup>Ibid., January 31, 1919, 5.

sometimes three, epidemics.”<sup>171</sup> Nothing was guaranteed, but at least to some, probability showed that the real question was not *if*, but *when*. Then, on February 7<sup>th</sup>, there were reports that officials in Wigan had closed the schools and cinemas due to an outbreak.<sup>172</sup> On February 10<sup>th</sup> Newcastle closed its elementary schools, and it was reported that in the week before there had been forty deaths due to the disease.<sup>173</sup> The next day, *The Times* gave an optimistic, and probably premature, account of this fresh new wave, saying that it was not as serious.<sup>174</sup> On February 13<sup>th</sup> an article in *The Times* carried the headline, “Return of Influenza – 169 Deaths in London Last Week.”<sup>175</sup> Anyone who missed this statement caught another one the next day, when a writer proclaimed that, “The epidemic of influenza... has unquestionably broken out again in a virulent form and our fears have been justified.”<sup>176</sup>

From the data collected after the pandemic we know that, for the country as a whole, this third wave was more virulent than the first, but thankfully milder than the second. In 1920 the Registrar General stated that from June 23 to September 30<sup>th</sup>, 1918, which we might term the first wave, there were 17,500 total deaths due to

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<sup>171</sup>“Epidemiology of Influenza,” *The British Medical Journal*, May 2, 1891, 975.

<sup>172</sup>*The Times*, February 7, 1919, 5.

<sup>173</sup>*Ibid.*, February 10, 1919, 5.

<sup>174</sup>*Ibid.*, February 11, 1919, 7.

<sup>175</sup>*Ibid.*, February 13, 1919, 5.

<sup>176</sup>*Ibid.*, February 14, 1919, 5.

influenza and its complications. From October 1<sup>st</sup> to December 31<sup>st</sup>, the second wave, there were 115,000 deaths due to the disease. And from January 1<sup>st</sup>, 1919 to May 10, 1919, roughly the third and final wave, there were 51,500 deaths. This accounted for a total of 184,000, which was augmented to “the round figure of 200,000” to allow for military personnel, and other people who might have died due to the disease but where this was not regarded as the cause of death.<sup>177</sup> Once again, incidence is difficult to determine. For one, the war meant that population figures were merely estimates. And there was still the old problem that influenza was not a notifiable disease. In addition, its attack rate varied considerably by locality. The MOH report did, however, give a few rates. For Manchester, the first wave attacked 71.4%, the second wave 49.6%, and the third wave 11.6% of the population. In Leceister the numbers were different, the disease attacking 34.1% in the first wave, 74% in the second, and 40.7% in the third wave. And finally, in Wigan the first wave attacked 20%, 36.2% in the second, and 54.8% in the third wave.<sup>178</sup> So there really was no uniform experience. Of course the people who lived through it did not know how many perished, and this pattern of intensity could differ geographically, which made it all the more difficult to predict the nature of a new onslaught. For instance, the February experience in Glasgow was worse, it was reported, than what had happened in the

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<sup>177</sup>*Report on the Mortality from Influenza in England and Wales*, 7.

<sup>178</sup>*Report on the Pandemic of Influenza, 1918-19, 1920*, 141.

previous October.<sup>179</sup> One writer realized this discrepancy, saying, “the view one takes of the extent of the trouble is apt to be coloured by the circumstances in which one happens to be living.”<sup>180</sup> Though the influenza diminished in London by late February, in early March Glasgow reached its highest recorded death rate, at 50 per 1000 people.<sup>181</sup> Precisely one week later deaths in Glasgow were down, but in Manchester they had risen.<sup>182</sup> By mid-March *The Times* was ready to claim that the third wave had ended.<sup>183</sup> And with this, articles concerning the domestic situation began to disappear. Only a few appeared in the remainder of March and the whole of April.

Even though *The Times* had declared the end of the third wave in its March 14<sup>th</sup> issue, it also established that the flu could return in as little as twelve weeks. With some qualification, the paper noted that, “If this periodicity is continued we may look for a fourth wave, beginning some time in April and ending about the first week in June. This, however, is mere speculation; there is no sort of evidence to justify any such anticipation. But it becomes evident that we are dealing with a type of infection which is not well understood.”<sup>184</sup> When the final wave ended in Britain in the spring of

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<sup>179</sup>*The Times*, February 18, 1919, 8.

<sup>180</sup>*Ibid.*, February 19, 1919, 8.

<sup>181</sup>*Ibid.*, February 25, 1919, 7 and March 4, 1919, 7.

<sup>182</sup>*Ibid.*, March 11, 1919, 9.

<sup>183</sup>*Ibid.*, March 14, 1919, 7.

<sup>184</sup>*Ibid.*

1919, no one knew it would be the end of this pandemic. As people were assessing what had just happened, they continued to watch the rest of the world in anticipation of yet another attack. People were on the lookout, and international articles continued to be printed. Australia, where the flu had been delayed but not prevented, became the center of attention in June and July as it continued to experience what the world had already gone through months before.

By September *The Times* was ready to predict another threat. On the 17<sup>th</sup>, after a ship coming from Bombay experienced outbreaks during the course of the voyage, an article contained the warning that, “the incident should serve to remind the authorities that the return of winter means a return of danger. A great epidemic is apt to recur when conditions favourable to it are prevalent. In this case there can be no possible excuse for failure to take precautions in advance.”<sup>185</sup> A little over a week later, in an article that recounted Scotland’s experience with the pandemic, the current mood was summed up by the statement, “The fear of a recrudescence this winter is universal.”<sup>186</sup>

The specter of the flu haunted the British people, as ships continued to arrive from abroad with active flu cases, and with every new case came the threat of another epidemic. On October 20<sup>th</sup>, *The Times* reported that people in London already

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<sup>185</sup>Ibid., September 17, 1919, 7.

<sup>186</sup>Ibid., September 25, 1919, 7.

thought they were witnessing “the new epidemic.”<sup>187</sup> In the following days more articles appeared. On October 22<sup>nd</sup>, it was reported that hospitals were taking precautions against an epidemic, as beds were being divided by sheets hung from the ceilings, and the staff were beginning to wear masks. The writer said, “It is by no means certain as yet whether the present somewhat mild ‘wave’ will develop or will merely die out, but the number of so-called feverish colds is definitely on the increase, and no doubt many of these are in reality cases of influenza.”<sup>188</sup> On October 25<sup>th</sup>, *The Times* carried two stories, one about the increase of the disease in southern Wales, the other a more foreboding look at the characteristics of a potential threat. According to the article, “Cases of influenza-pneumonia, similar to those encountered during the great epidemic, are again in evidence. So far, happily, they are not many in number: but no guarantee can be given that they will not increase.”<sup>189</sup> As the Ministry of Health issued a statement saying that the evidence did not yet point to another epidemic, by the end of the month *The Times* had started printing the weekly nationwide fatalities due to the disease, which had increased from 18 to 71.<sup>190</sup> By early November it was reported to be spreading in Paris, and a writer for *The Times* made the comment,

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<sup>187</sup>Ibid., October 20, 1919, 9.

<sup>188</sup>Ibid., October 22, 1919, 9.

<sup>189</sup>Ibid., October 25, 1919, 9, 12.

<sup>190</sup>Ibid., October 27, 1919, 9 and October 30, 1919, 9.

It is an interesting speculation whether this represents a weakening of the potency of the germ, an increase of the resistance of the community, or merely a mild first wave of an epidemic destined, as observed last year, to increase in severity. Unhappily, with our present knowledge no answer can be given, because we do not yet know to what extent one attack of influenza protects against other attacks occurring after an interval of time.<sup>191</sup>

Still, no one knew how this would play out. But amidst this speculation about what would happen, the big influenza story of November 7<sup>th</sup> was a theory by Dr. Brownlee, carried in *The Lancet*'s November 8<sup>th</sup> issue.<sup>192</sup> In it, Brownlee stated that "It is impossible with existing knowledge to prophesy. ... [but] it is found that the interval between the epidemics is 33 weeks, there being a missed epidemic when an epidemic is due in the autumn."<sup>193</sup> In other words, another outbreak could be just around the corner.

Preventative steps continued to be taken. Troopships bringing soldiers home, mostly from India, frequently had outbreaks of the disease during the journey, often with soldiers arriving in England ill, and thus facing quarantine. In an attempt to reduce this, the War Office adopted various measures, such as reducing the number of passengers on each transport.<sup>194</sup> On December 27, the paper published suggestions concerning the prevention of influenza issued to local authorities by the Ministry of

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<sup>191</sup>Ibid., November 3, 1919, 11 and November 4, 1919, 9.

<sup>192</sup>Ibid., November 7, 1919, 9.

<sup>193</sup>John Brownlee, "The Next Epidemic of Influenza," *The Lancet*, November 8, 1919, 856.

<sup>194</sup>*The Times*, December 16, 1919, 16.

Health.<sup>195</sup> Despite the reappearance of the disease in January in Paris, London, and England's Black Country, articles were still cautious in their pronouncements, saying, "Many prophets have foretold an outbreak during the early months of 1920, and consequently every authority is alive to the danger. It remains to be seen how far these forecasts are likely to be justified."<sup>196</sup> Similar sentiment continued to be voiced, and a few days later an article's headline declared that another epidemic was "probable." Its text said that though there was no increase in deaths in the country, because the flu was flaring up in the United States, Poland, and Japan, the MOH expected another wave to hit Britain.<sup>197</sup> The disease continued to spread, appearing in Switzerland and Sweden, and later in Germany. Precautions were still being taken in Britain, and pamphlets were distributed throughout London. Britain, for the most part, seemed to be escaping this reappearance. A writer for *The Times* triumphantly exclaimed, "It is too early as yet to speak with any confidence, but it would seem as if the event may show that wide publicity and official action can materially affect this situation – a claim which was put forward last year in *The Times*."<sup>198</sup> At least some believed that people had learned something after all, though there were plenty who remained skeptical about this. In late February the MOH issued another bulletin,

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<sup>195</sup>Ibid., December 27, 1919, 7.

<sup>196</sup>Ibid., January 19, 1920, 9.

<sup>197</sup>Ibid., January 27, 1920, 12.

<sup>198</sup>Ibid., February 5, 1920, 12.

saying that the flu present in the United States was of the same type as the one that hit the world in 1918-19, but that, despite a rise in flu related deaths in Britain, there was no evidence yet of pandemic influenza in the country.<sup>199</sup>

In January 1920 N.A. Camby, surgeon to the Metropolitan Police, wrote, “There seems to be every prospect of another epidemic of influenza in the near future.”<sup>200</sup> He asked for permission to allow police officers to receive inoculations once again, and his request was granted. The Ministry of Health issued a pamphlet that month. In it, they warned of the possibility of a fresh outbreak:

The latest returns for England and Wales (with a few exceptions which may be mere chance occurrences) do not at present show any sudden increase either of deaths attributed to influenza or of notifications of infectious pneumonia. The Ministry of Health have, however, kept under close observation records of epidemic sickness at home and abroad, and in view of the almost simultaneous increase of influenza in great American cities, in Europe (Poland), and also in the Far East (Japan), the Ministry consider that there is considerable probability of another wave of influenza developing in this country at an early date.<sup>201</sup>

In February 1920 the Treasury was also granted a similar request for nurses to inoculate those staff members who wished to do so.<sup>202</sup>

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<sup>199</sup>Ibid., February 27, 1920, 9.

<sup>200</sup>The National Archives, “Costs to inoculate Metropolitan Police” (London, England: MEPO 2/8586, January 20, 1920).

<sup>201</sup>The National Archives, “Influenza Hints and Precautions” (London, England: T1/2484, February 1920).

<sup>202</sup>The National Archives, “Inoculating the Treasury Staff Against Influenza, 1920” (London, England: T1/12484, 1920).

As deaths steadily continued, by late March *The Times* had started calling the new outbreak an “epidemic,” but said it “is not nearly at present so severe nor yet nearly so widespread as it was during the spring of 1919.”<sup>203</sup> This label did not signify a turn for the worse, though, because even though it was precipitated by a sharp increase in deaths, in Britain it never assumed the proportions of what happened in 1918-19, nor did it have the serious pneumonic complications that the disease spurred in those years. And it soon declined, with the death rate steadily decreasing in April, and by July the newspaper no longer printed the number of deaths due to the disease.

It must be pointed out that once again there was still anxiety about the possibility of another pandemic outburst. The Ministry of Health even set a meeting for investigating the “present prevalence” of the disease in February 1920, examining the death-rate, the cases of pneumonia, and many other pieces of data, including returns from America and India.<sup>204</sup> Because the first wave in 1918 was relatively mild, when the disease broke out in Monmouth in early October 1920 *The Times* reminded readers that, “it should be recalled that the second wave of the great epidemic began on September 15, 1918, and reached its maximum in October. Monmouth suffered heavily. It was also one of the first areas attacked by the first wave.”<sup>205</sup> At the same time, they reminded readers, “That such a visitation as we have recently suffered from

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<sup>203</sup>Ibid., March 25, 1920, 13.

<sup>204</sup>The National Archives, “Influenza Committee Correspondence with LGB and War Office” (London, England: FD 1/535, 1920).

<sup>205</sup>*The Times*, October 5, 1920, 7.

is likely to recur is a view which statistics do not support. On the other hand, no statistics would have suggested the experience of the year before last.”<sup>206</sup> But nothing happened. People continued to wonder if another pandemic might hit the country in the future, and small epidemics did recur, but the period of rampant disease had passed. The British persevered, and they were now in the clear. In 1920, no one could have predicted what was going to happen, but the world has yet to suffer another flu pandemic as deadly as these two.

During these periods perceptions about influenza and its epidemic and pandemic outbreaks were challenged. There were always previous outbreaks that people referenced while attempting to gain insight into the unknown. In 1889 they consulted 1847, and in 1918 they looked back to the late 19<sup>th</sup> century. But much of the knowledge gained from such a study could not and did not transfer to what they were experiencing. For one, it was impossible to predict the course of the disease once it had sprung upon the world stage. In late 1890, and again in 1920, observers were unable to predict whether the disease would reach Britain, and in these years it did not. The waves followed different courses geographically, in duration, and in intensity, than their historical predecessors. Though there was some overlap, the waves of each pandemic affected different areas. They were spaced further apart in the early 1890s than they were in the late 1910s. And, in the 1890s it was the third

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<sup>206</sup>Ibid.

wave that caused the most loss of life, while in the latter pandemic it was the second wave that was most fatal.

It is difficult to pinpoint a start to epidemics and pandemics of influenza. For one, the terms “epidemic” and “pandemic” are partly subjective, and in the time period under discussion, even the definition of “influenza” was incomplete and contested. Another difficulty is that the flu has regular annual visitations. To determine what flu virus is active at any given time a test must be performed to determine its composition. Lacking this, in the late 19<sup>th</sup> century and early 20<sup>th</sup> they were forced to rely on descriptions, so it was not until the death toll rose and people were in the heat of the epidemic or pandemic that a difference could be noted. How could they definitively know if earlier reports truly belonged to an epidemic, then? Another difficulty, as noted above, is that cases went unreported. This, along with the attendant suspicion that many did not know they had contracted the disease were points commonly remarked on during these pandemics.

There is also a difficulty in how to conceptualize these pandemics. In the 1890s people were much more comfortable talking about individual epidemics, and perhaps this was more judicious than imposing a pandemic scheme on the whole period. Given that the 1891 visitation only affected a few countries, and that in Britain it was relatively restricted in geographic scope, is it fair to claim that this was part of a pandemic? And without samples from each of the outbreaks, how can we ever be sure of the connection? Or, perhaps there is a connection (or connections, even) to a later

or earlier year that is not being made. Why might they fail to see a pandemic when modern observers presuppose that one existed in each of these periods? In the early 20<sup>th</sup> century there seemed to be about the same advance warning from other parts of the globe as there had been in the late 19<sup>th</sup> century. There was a difference, though – in the earlier pandemic the waves were separated by a few more months. This, and perhaps other factors, allowed Britons to nurse a belief that the menace might not reach them in 1889. The course of the disease was not predetermined. And this seemed to foster the idea that, until it did breach their stronghold, it was someone else's problem. In 1889 it was Russia's, and then the Continent's, concern. On a smaller scale this might also operate within an individual country. In 1891, for instance, it was for places like Sheffield to deal with, at least in the beginning. Its appearance in capitals or hubs of transportation did not guarantee its total dissemination in a country. And there was no uniform bell curve for countries as a whole – in incidence, duration, mortality, or any other criterion. This lack of solidarity gave a certain disunity to the individual outbreaks.

Taken together these pandemics illustrate a wealth of points about influenza that might help modern readers to better assess the situation in the present. Although given life's infinite variables it is impossible to draw direct historical parallels, generalizations are still applicable. For one, it is unfeasible to attempt to determine the origin of a flu epidemic or pandemic. Because the flu is airborne and quickly spreads from individual to individual, pinpointing its genesis on a map is probably impossible.

It is just as likely that the same problems that presented themselves in these pandemics would operate in any future pandemic of influenza, if there is one. The disease appears in distant locales seemingly simultaneously because, like in 1889 and 1918, travel is rapid. In the outbreaks studied here timing affected the onset of the disease. In 1889 and 1891 the flu struck around Christmastime, which meant that people were traveling, giving them the opportunity to spread the germ. In 1918 and 1919 the same held true with demobilization. But this was not a necessity to cause an epidemic – normal migration might do the same. Consider, for example, the spring 1891 outbreak in Britain and the United States. Many have recently argued that even faster travel has exacerbated the disease's spread. But *if* the germ can jump directly from migrating birds, this whole discussion about human travel is moot. And though observers may believe they have witnessed the first case when an epidemic or pandemic begins, once everyone is on the lookout revisionism sets in, places of origin change and dates of onset get pushed back. There is always the possibility, too, that the first cases will go unrecorded. There may not be fanfare before an epidemic. There may not be a warning. Though the British people had advance reports from other countries in most of these years (which did not guarantee that the disease would appear there), there were no major signs in the fall of 1918.

All of these truths combine to show that there is no uniform influenza experience. It varied for countries around the world in the grip of the same pandemic. Even people within a country did not always share comparable experiences. And it

was certainly divergent in different pandemic periods. We should not be so hasty in planning our future according to their past.

## Chapter II – British Medical Knowledge of the Flu – Speculation

When the epidemic that began in 1889 erupted, it soon became clear that there was a large deficiency in medical knowledge concerning a disease that some parts of the world were dealing with, and that others might soon be experiencing. The disease was not new. It had been around for centuries, and yet there were many questions that perplexed both lay and scientific observers. As influenza spread and became more of a threat to the world, writers rushed to shore up this deficit. But did they have anything to offer?

It was a noble task, and some believed it was the highest calling. In 1889 a writer to the *British Medical Journal* expressed the belief that “Those who help to put together the ‘puzzle of life,’ and to show the exact relations which exist between the germs of disease and the conditions of the environment which determine their growth and destruction, will indeed be the world’s benefactors.”<sup>1</sup> But one of the central problems with this urgent and vital endeavor, which some vehemently felt crippled the effort as a whole, was a lack of cooperation. This want of cohesion existed across occupational lines (doctors often felt they were too divorced from research), and along internal ones as well, as doctors failed to develop any type of consensus concerning the disease. On October 30, 1918, the *Daily News* reported that “Doctors’ views

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<sup>1</sup>“The Influenza Epidemic of 1889,” *The British Medical Journal*, December 14, 1889, 1363.

continue to differ widely as to the cause of the epidemic and the means by which the infection is spread.”<sup>2</sup> Though a substantial amount of knowledge was learned, or thought to have been learned, in the 1890s, much of this was lost on that generation of researchers and doctors working when the next major outbreak hit in 1918. The Local Government Board [LGB] attempted to eliminate these misgivings in 1919 when it printed this statement: “This outbreak is essentially identical, both in itself and in its complications, including pneumonia, with that of 1890. The disproportionate occurrence of a special symptom, a well-recognised phenomenon in the case of epidemics, as for example nose bleeding in the present epidemic, does not invalidate this statement.”<sup>3</sup> This meant that the foundation laid by the accumulation of knowledge gathered about the disease during the previous outbreak was squandered, only to be rediscovered ‘anew’ at the later date. But the discussions that were carried on in the journals, newspapers, and conferences into the 1920s testified to the conservative nature of the scientific community.

When the flu overwhelmed Russia in 1889 and began to make its way west across Europe, it had been decades since the last major outbreak in Britain, and medical knowledge was dramatically different. For instance, the germ theory of disease altered the way in which ailments were perceived. And there had been significant scientific advances made in reference to other diseases, allowing these

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<sup>2</sup>“Influenza,” *Daily News*, October 30, 1918, 5.

<sup>3</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA,” (London, England: MH 10/84, 1919), 3.

scourges to be tamed. For instance, there were now successful ways to manage one of the century's greatest and most gruesome killers, cholera. But even though influenza had been around for at least three centuries, and for millennia according to some, little was known about it. In March 1837 the Hunterian Society sent a questionnaire to members asking them about their experience with the influenza epidemic that had occurred earlier in that year. It was the third one of the decade, and the previous outbreak, which ended in 1833, "has been ranked in terms of severity with the pandemic of 1918-1920."<sup>4</sup> Its impact had become notorious before the century's end. In 1892 one writer remarked, "Alarming as the present epidemic is, it would appear that the influenza of 59 years ago was very similar in its ways and as deadly in its effects."<sup>5</sup> So in the 1830s the flu was fresh on people's minds, and given its immensity in the decade it must have been a weighty concern, too. Some of the Hunterian Society's questions were typical fact finding queries, such as when the disease started and ended, or what percent of the population was affected, that one might find in an inquiry about any outbreak. Others, though, demonstrate where the holes in the knowledge of the disease existed. For instance, they asked "Was there anything remarkable as the health of the population, or the healthfulness of animals, immediately

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<sup>4</sup>Christopher W. Potter, "Chronicle of Influenza Pandemics," in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 6.

<sup>5</sup>*The Times*, January 26, 1892, 6.

prior to the visitation in question?,” and “What treatment was found most successful.”<sup>6</sup> These show that they were gathering information concerning a disease about which little of certainty was known. The questions alone demonstrate that they did not know of any successful treatment, and that they were unsure about the reservoirs for the disease (animals, perhaps?) and its method of spread. If they had known the answers, they would not have been asking the questions.

By the 1890s and 1910s little new had been learned about influenza, because these subjects were still being discussed by those who would become intimately acquainted with the disease. Contemporaries were aware of this at the time. A letter to the editor of *The Times* from May 1891 quoted a speech from 1837 about how the flu spread in the epidemic of that year. After this inclusion the writer commented, “This was written before the microscope had come into domestic medical use, and when the bacillus was still unknown and unfashionable, but it has something prophetic about it, and I do not know that half a century has taught us much more.”<sup>7</sup> In April, 1890, at “the annual general meeting of the Medical Officers of Schools’ Associations,” the proposed questions for discussion were “Is ‘influenza’ merely catarrh in an epidemic form? Does occupation or exposure modify the access or course of the disease? How does the disease affect communities, especially schools?

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<sup>6</sup>Wellcome Library, “Hunterian Society Notes,”(London, England: 5549/69/6, 1837).

<sup>7</sup>Robert Farquharson, *The Times*, May 19, 1891, 5.

Is it contagious? What is the incubation period? Is segregation desirable or possible? Does one attack secure immunity?"<sup>8</sup> In 1836 and 1837 some had thought the disease was contagious, while others believed it was carried on the wind or that it was due to a change in the weather.<sup>9</sup> This issue was still being discussed at the end of the century. In June 1891 Dr. Richard Sisley wrote his book *Epidemic Influenza: Note on its Origin and Method of Spread* as an attempt to convince his colleagues that the disease was, beyond all doubt, contagious. He admitted it was "a subject which was then new to me" before he wrote the first article on the topic in January 1890.<sup>10</sup> The disagreement over contagion would become one of the foremost debates about the disease, and one of the most essential in understanding how the flu operated.

To provide some appreciation of how the landscape had changed, after the world's first bout with the pandemic that began in 1889, E. Symes Thompson published an expanded version of his father's book, the *Annals of Influenza* [1851]. Containing descriptions "in the words of the original observers," the original work by Theophilus Thompson was the reference point for most Britons schooled on

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<sup>8</sup>Alder Smith and Chas. Edwd. Shelly, "Medical Officers of Schools' Association and Influenza," *The British Medical Journal*, April 19, 1890, 924-925.

<sup>9</sup>"The Influenza Epidemic of 1836-37 and 1889-91," *The British Medical Journal*, May 23, 1891, 1145.

<sup>10</sup>Richard Sisley, *Epidemic Influenza: Note on its Origin and Method of Spread* (London: Longmans, Green, and CO., 1891), x.

influenza.<sup>11</sup> Of the elder Thompson's work, Sisley wrote, "Dr. Thompson's classical compilation is one from which succeeding writers on the subject have freely drawn, and often without any acknowledgment of the source of their information or of their authority."<sup>12</sup> As a historical analysis of the previous epidemics that had visited England, this book provided doctors, researchers, and others with descriptions that informed them about various aspects of the disease. Despite his son's admission that "The epidemic of 1889-90 is too recent – indeed, it cannot yet be considered to have entirely left us – to allow of so comprehensive a description as we could desire," it was still seen as a necessity to get the new edition to the publisher.<sup>13</sup> But it was a cause that he was wholeheartedly committed to, because, "I believe that the pernicious views held by 'physicians of great respectability,' not only in this, but in other enlightened nations, have caused and are causing a neglect of precautions against the spread of the disease."<sup>14</sup> Interestingly, he begins his book's preface with a quote from Dr. Haygarth, who died in 1827: "The contagious nature of Influenza had, I thought, been sufficiently proved by many physicians... So far as it can be proved that a disease is

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<sup>11</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), v.

<sup>12</sup>Sisley, *Epidemic Influenza*, 6.

<sup>13</sup>E. Symes Thompson, v-vi.

<sup>14</sup>Sisley, *Epidemic Influenza*, ix-x.

produced by contagion, human forethought can prevent the mischief.”<sup>15</sup> This shows why the topic was so important to Sisley and his like-minded colleagues; accepting this fact would foster the adoption of more steps towards preventing the scourge. But it is significant for another reason. It shows that throughout most of the 19<sup>th</sup> century the answer to one of the principal questions about the nature of the flu had been present, yet it was not accepted in 1891, nor was it fully acknowledged in 1918.

Private individuals were not the only ones concerned with setting the record straight. The government made an effort, too. On January 17<sup>th</sup>, 1890, soon after the first outbreak of the 1890s pandemic occurred, the LGB sent out 1,777 questionnaires to Medical Officers of Health in England and Wales, receiving around 1,150 replies.<sup>16</sup> Amongst questions such as when the influenza epidemic began was this: “Have you observed among domestic animals any unusual complaint; and in what animals, and with what symptoms?”<sup>17</sup> This was the same type of information that the Hunterian Society was trying to gather in 1837. The potential connection between the flu and animals had been studied for years, and it was freshly renewed in 1889 before the epidemic reached Britain. On December 6<sup>th</sup>, 1889, a letter to the editor claimed that the disease could be traced to cats.<sup>18</sup> An article a week later extended the scope,

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<sup>15</sup>Ibid., ix.

<sup>16</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 120-121.

<sup>17</sup>Ibid., 120.

<sup>18</sup>*The Times*, December 6, 1889, 10.

saying, “It is authoritatively stated that the prevalence of the disease in the human race has always been coincident with the prevalence of a similar disease among domestic animals – dogs, cats, cows, and especially horses.”<sup>19</sup> Sisley wrote, “There is no subject of greater interest to medical men, than that of the connexion between the diseases of animals and those of man, and there is no subject in which greater advances in knowledge have been made within recent times.”<sup>20</sup> Horses were a popular potential culprit in the 1890s. One commentator noted, “It is a striking fact that horses are subject to a disease very similar to, if not identical with, human influenza.”<sup>21</sup> In 1890 Thompson wrote, “it would be hazardous to say that there is any direct relation between the human and the equine malady, for influenza is very often rife among horses when there is none in man and *vice versa*, while the occasional coincidence of the two, of course, proves nothing of itself.”<sup>22</sup> But this did not quiet the scientific community. In 1891 Dr. R. Bruce Low posed the question of “Whether a common poison affected first the horse and then man – or whether man’s poison was first elaborated in the horse before it acquired sufficient potency to reach man.” His conclusion was that “there is not as yet evidence to decide.”<sup>23</sup> Althaus was not so

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<sup>19</sup>Ibid., December 13, 1889, 7.

<sup>20</sup>Sisley, *Epidemic Influenza*, 118.

<sup>21</sup>Ibid.

<sup>22</sup>E. Symes Thompson, 420-421.

<sup>23</sup>R. Bruce Low, “Notes on Influenza in Lincolnshire and East Yorkshire,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her

certain, citing the same reason as Thompson: “it is notorious that horses suffer more or less from ‘pink-eye’ almost every year; and that the epizootic of 1889 which preceded the epidemic of grip of the same year was a comparatively slight one, while highly destructive epizootics have occurred in recent years without being followed by an epidemic of grip in men.”<sup>24</sup> Even Thompson had admitted that in 1889 he had warned people in the *British Medical Journal* that the outbreak in horses of that year might signal an outbreak in people, and he asked readers to bear in mind that though conclusive evidence did not exist there still might be some connection in this area.<sup>25</sup>

Dr. H. Franklin Parsons noted that “In many places where Influenza has been epidemic, domestic animals, especially those living indoors, as pet dogs, cats, and caged birds, have been noticed to be concurrently affected with symptoms resembling those of Influenza.”<sup>26</sup> Concerning horses, Parsons wrote, “Whether a common poison affected first the horse and then man – or whether man’s poison was first elaborated in the horse before it acquired sufficient potency to reach man – there is not as yet

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Majesty’s Stationery Office, 1891), 262.

<sup>24</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> Edition, (London: Longmans & Co., 1892), 283.

<sup>25</sup>E. Symes Thompson, 422.

<sup>26</sup>H. Franklin Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationery Office, 1893), 106.

evidence to decide.”<sup>27</sup> He did admit, however, that “it is possible that they are distinct diseases.”<sup>28</sup> In 1893 Dr. Klein was unable to reproduce the disease in rabbits or monkeys, and could not experiment on horses because he did not have a justification to expand his budget to investigate this type of query. Klein wrote,

The popular notion appears to rest on no better ground than that the name ‘influenza’ has often been given to a contagious febrile catarrhal affection in horses which, owing to its febrile character, the great weakness that follows it, and the congestion of the nasal and conjunctival and bronchial membranes bears a certain resemblance to what we see in the veritable influenza of man.<sup>29</sup>

This debate was not confined to the 1890s, for in 1919 it was reported on again. From South Africa, it was said to affect primates, and in Canada it was said that “influenza is decimating big game, and that for some time the smaller animals have shown marked symptoms of the disease.”<sup>30</sup>

This idea about animals was more misguided than absolutely incorrect. There are a wide variety of animals that serve as hosts for the influenza virus. The disease has a natural host reservoir in the intestinal tract of birds, where it coexists without causing any detrimental symptoms. It can pass on to other animals, like swine, where it might mutate and cause symptoms in the animals, and can also be passed to humans.

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<sup>27</sup>Ibid., 262.

<sup>28</sup>Ibid., 263.

<sup>29</sup>Dr. Klein, “Report on Influenza, in its Clinical and Pathological Aspects,” in H. Franklin Parsons, *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 139.

<sup>30</sup>*The Times*, January 14, 1919, 7.

In the British experiments conducted by Christopher Andrewes and his colleagues in the early 1930s to isolate the causative agent of influenza, researchers found that ferrets contracted the disease with familiar observable symptoms, and were able to pass it back to humans. In 1890 Thompson was close to our current understanding of the disease when he wrote,

We know that the virus of certain diseases can be attenuated or intensified at pleasure by their passage through the organisms of different animals, and possibly the virus of influenza, at first unable to attack man, may by spontaneous cultivation in the organisms of the lower animals become endowed with increased virulence until, under favourable circumstances, it is enabled to overcome the resistance offered to its entry by the human tissues.<sup>31</sup>

But the earlier prognostications of the 1890s and 1910s were mere guesses, unsubstantiated visual observations, or coincidences. So we should not be too hasty in pronouncing past actors prescient, because this questioning shows at least two things – they were willing to explore every possibility and they knew very little.

In 1891 the Local Government Board published a report authored by Dr. H. Franklin Parsons about the epidemics that the country experienced in that year and the previous one. At the time no one, including himself, knew that the most significant outbreak of the decade would come in the next year, 1892, and that 1891 would not see the last outbreak of that pandemic. This knowledge might have postponed the publication of the report so that information about this most serious episode could be included, but we are constantly reminded by this and other incidents that past actors

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<sup>31</sup>E. Symes Thompson, 422.

did not know the course that events would take. Nonetheless, the findings contained in his report provided some information that helped guide the people during the next outbreak. Current medical knowledge about influenza shows this advice was quite sound. In this report the Medical Officer of the Local Government Board, George Buchanan, wrote that “in its epidemic form Influenza is an eminently infectious complaint, communicable in the ordinary personal relations of individuals one with another. It appears to me that there can henceforth be no doubt about the fact.”<sup>32</sup> There were also ideas about the brief incubation period and the sustained infectiousness of an individual. Though Parsons disagreed with the following statement, he nonetheless recorded that “some medical men doubt whether there is any incubation period, and consider from the suddenness of the onset of the disease that the poison is taken into the system in a condition and dose such as to produce immediate effects.”<sup>33</sup> Granted, not all of the information would hold up to the scrutiny of later generations, such as the idea that “In some circumstances it would seem that infectiveness of Influenza through the atmosphere shows itself over a wider area than the limits of household life. Probably also there are other less direct ways by which the infection of the disease can travel.”<sup>34</sup> Parsons was not arguing that the disease could

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<sup>32</sup>George Buchanan, “Introduction by the Medical Officer” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), x.

<sup>33</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 64.

<sup>34</sup>Buchanan, x.

exist on surfaces. The idea here is that the disease could travel on a breeze, whisked away to far off lands by the wind. This was a concept that was already obsolete by the 1890s, but it would survive attacks throughout the early part of that decade and, interestingly, would resurface in the late 1910s.

In January 1892 the LGB issued a memorandum based on information collected by Parsons in 1891. By current standards, the memorandum showed a surprising amount of sound advice. They called for isolation of the sick and disinfection of materials and the room where the infected were being treated. They recommended that people stay away from large crowds “when an epidemic threatens.”<sup>35</sup> Avoiding the cold, fatigue, and mental and physical strain were also stressed. Wearing warm clothing, eating nourishing food, and refraining from drunkenness were seen as vital to maintaining individual resistance. Finally, they offered this piece of advice: “Persons, therefore, who are attacked by this malady should not attempt to fight against it, but should at once seek rest, warmth, and medical treatment.”<sup>36</sup> Practitioners felt that they had made great strides in many aspects concerning influenza. In his own book, also published in 1892, Dr. Julius Althaus said, “There can be no doubt that the epidemics of grip of the years 1889-91 have been the most interesting medical event of late years, and that they have taught us

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<sup>35</sup>The National Archives, “Precautions against Epidemic Influenza,” (London, England: MH 113/29, 1892), 2.

<sup>36</sup>Ibid., 3.

a great many lessons which we did not know before.”<sup>37</sup> Like the LGB, he too preached a message of contagion and hygiene: “it seems highly probable that infection is habitually produced by the expectoration charged with the bacillus of grip; and the speedy removal and disinfection of the sputa of patients suffering from influenza are, therefore, as urgently required for prophylaxis as in the case with the sputa of consumptive patients.”<sup>38</sup> Sisley, too, had something to add to this. For while he ardently believed that the disease was spread by contagion, he thought its effects might be exacerbated by undesirable conditions: “If the disease be introduced it often spreads rapidly, especially under unhygienic conditions.”<sup>39</sup> We can see in all of these that the writers were suggesting what would have been common medical sense at the time, and still is: stay healthy and practice good hygiene.

There were other ongoing debates, like tracking the source of the different pandemics. This was widely disputed in the past, and it is a topic that has not been definitively answered. In the 1890s, the pandemic was labeled the “Russian Influenza,” while in 1918 and 1919 the pandemic that inundated the world was popularly referred to as the “Spanish Flu.” These names tell us little about the actual origins of the disease, for they often merely refer to the first truly publicized areas where the disease hit, or some prejudice about the country whose name became part of

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<sup>37</sup>Althaus, 2.

<sup>38</sup>Ibid., 9.

<sup>39</sup>Sisley, *Epidemic Influenza*, 35.

the appellation. They show more about things like the press and popular opinions of contemporaries than the (unknown) scientific truths of the origin of these viruses. Dr. Richard Sisley wrote,

Influenza, as observed in Europe, has passed from one nation to another, and it has been the tendency of each nation to give it a name referring to the country from which it was imported. Some of the Jewish writers called it Kurdaikis, from its supposed origin from the Kurds. To the Russians it has been Chinese catarrh, to the Germans and Italians, Russian fever. At different times in France it has been Italian fever, Spanish catarrh, and Russian influenza. During the late epidemic the latter term was applied to the disease by Continental authorities of all nationalities, and by some English writers. I see no more reason to perpetuate a national discourtesy in this case than in that of any other contagious malady.<sup>40</sup>

Given the shady origins of naming the pandemics, it should come as no surprise that many times these names might betray the true path of the disease. In 1892 Althaus wrote,

while we speak of ‘Russian influenza,’ the Russians call the same disease the ‘Chinese cold,’ and are unanimous in tracing its origin to China. This hypothesis is controverted by the fact that China, so far from being the first to suffer by the epidemic, only began to be affected after the English mail steamer had arrived in Hongkong in January, 1890, having cases of influenza on board.<sup>41</sup>

People were eager to know where the ailment came from, but there really was not and is not an answer to this question of geographic origins. The 1891 LGB report on the epidemic stated, “The matter which exercised the public mind throughout last year was

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<sup>40</sup>Ibid., 3.

<sup>41</sup>Althaus, 281.

the Source of Influenza. As to this, I fear that, to many people, the report will be disappointing. The universal desire in every country appears to have been to accuse another country of generating the epidemic; accusing by preference the more distant ones.”<sup>42</sup> So while these names were catchy, and while they continue to misinform and misguide people, in actuality they have no real significance to the germ in question. Those in the know knew this at the time.

One of the things that made it most difficult to trace the disease was a lack of knowledge about it, specifically the nature of how it was spread. In 1891 Dr. Frank Nicholson wrote, “the whole question of the etiology of influenza and the mode in which it spreads is still a mystery, and we can only hope some light may ere long illumine the darkness that enshrouds it.”<sup>43</sup> Parsons argued that the problem lay not only with Influenza itself, but with the people who chronicled it:

The etiology of epidemic Influenza presents a difficult problem, especially owing to the apparently capricious behaviour of the disease in different times and places; or as recorded by different observers. It is hardly possible to deduce from the recorded facts of the occurrence of the disease any general statement which is not contradicted by experience elsewhere.<sup>44</sup>

Sisley was of the same opinion: “I must here say that striking ‘facts’... have frequently turned out on careful investigation to be due to the fancy of the savant and not the

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<sup>42</sup>Buchanan, ix.

<sup>43</sup>Frank Nicholson, “The Complications and Sequelae of Influenza,” *The British Medical Journal*, June 13, 1891, 1275.

<sup>44</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 70.

result of observation.”<sup>45</sup> Driving the point home many pages later he similarly stated, “When these facts are born in mind it will be readily acknowledged that the unexplained appearance of the disease in an isolated place only points to our incomplete knowledge as to its introduction there, and need never excite wonder.”<sup>46</sup> What about the disease might “excite wonder”? One of the properties that most perplexed observers was the swiftness with which the disease infected far-flung communities. E. Symes Thompson wrote that “Unlike cholera, it often outstrips in its course the speed of human intercourse.”<sup>47</sup> He further stated,

We have to ask ourselves how it is that it sometimes spreads with such wonderful rapidity while at others it remains confined for a time within a more or less narrowly circumscribed area? Evidently the only possible explanation is that there must be something in the conditions of the environment which either favours the evolution of the virus or renders persons abnormally and unusually susceptible to its influence.<sup>48</sup>

Given this speed people were highly concerned with how it traveled from one part of the world to another. An article in *The Times* from January 6<sup>th</sup>, 1890, blamed “Letters from Russia” because two stricken Liverpool merchants had both handled letters from continental Europe.<sup>49</sup> This theory concerning letters appeared again, in May 1891, when *The Times* reported that MP Henniker Heaton had been forbidden to receive

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<sup>45</sup>Sisley, *Epidemic Influenza*, 22.

<sup>46</sup>Sisley, *Epidemic Influenza*, 88.

<sup>47</sup>E. Symes Thompson, vii.

<sup>48</sup>*Ibid.*, 418.

<sup>49</sup>*The Times*, January 6, 1890, 9.

visitors or letters for the previous twelve days while he was ill.<sup>50</sup> In the 1891 LGB report Parsons acknowledged that, at least in one locality, the postmaster may have contracted the disease through an infected letter.<sup>51</sup> In 1891 one doctor surmised that the spread of influenza might in part be transmitted by “parcels.”<sup>52</sup> Parsons was willing to accept that influenza might be carried by clothing, letters, and merchandise, as well as domestic animals.<sup>53</sup> So did R. Bruce Low, who believed this explanation despite a total absence of evidence. He recorded, “I met with no facts bearing on the spread or importation of the disease into new localities by means of infected clothing or other articles, but this is a very probable mode of infection.”<sup>54</sup> Dr. Tatham, medical officer of health for Manchester accepted both contagion and other means: “I think that the evidence we now possess tends to the conclusion that, in the first instance, personal infection was the direct cause of the appearance of the disease in particular localities, whether from person to person directly, or by the carriage of infection through the medium of some article recently possessed by a sick patient.”<sup>55</sup> Sisley, on

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<sup>50</sup>Ibid., May 8, 1891, 10.

<sup>51</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 92.

<sup>52</sup>*The Times*, May 22, 1891, 14.

<sup>53</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 98.

<sup>54</sup>Low, 243.

<sup>55</sup>Dr. Tatham, “Memorandum on Influenza Prevalence in Manchester,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 284.

the other hand, did not believe that the disease could travel on this type of medium, perhaps because he felt it might steal some of the emphasis from the theory of direct contagion. He argued that “the evidence in favour of the spread of influenza by parcels is not convincing.”<sup>56</sup> Mr. R.C. Tombs of the London Postal Service affirmed that the disease’s introduction was not due to the mail: “It was thought at one time that infection might have been conveyed by the foreign mails, but this is scarcely borne out by the facts of the case, the proportion of sick absence among the officers dealing with the mails as they arrived being 11 per cent. out of 369, while the proportion for the rest of the force was 12 per cent. of 12,530 persons.”<sup>57</sup> In 1893, Parsons had still not made up his mind on this matter. He wrote, “I cannot say that the experience of the later epidemics has given any additional reason for supposing the existence of such a medium, and still less has it pointed to what the medium may be. On this point we may hope for enlightenment from bacteriological research.”<sup>58</sup>

Weather was another common suspect. In December 1889 *The Spectator* wrote that the weather in London was not sufficiently different than Paris to avert an outbreak

unless, indeed, it should turn out that London’s smoke-fogs possess high enough antiseptic qualities to prevent or greatly check the spread of

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<sup>56</sup>Sisley, *Epidemic Influenza*, 109.

<sup>57</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 184.

<sup>58</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92”, 47.

infection. This contingency is, however, almost too remote for calculation; and it is much more likely that the irritating character of the London atmosphere in January and February will predispose us to taking the influenza, and render its effects more unpleasant than ever.<sup>59</sup>

The most direct way to blame the weather was to argue like Dr. Powell, of Westminster Hospital, that the disease was not infectious at all, but was climatic.<sup>60</sup> At the end of the 19<sup>th</sup> century this was a commonly held opinion. In January 1890, John Oakley conveyed to *The British Medical Journal* his “opinion that the disease is of a malarial character, and that its endemic prevalence is favoured or determined by meteorological conditions.”<sup>61</sup> In February 1890 Dr. John Haddon wrote, “At the present time, when influenza is so prevalent and causing such excitement all over the world, there are some questions one would like to have answered, such as: (1) Does it depend entirely upon climatic influences? (2) Is it infectious? (3) Do sporadic cases occur?”<sup>62</sup> Another man, Robert Barnes, wrote, “This is an opportunity that should not be lost of studying some of the relations of meteorology to health.”<sup>63</sup> In the minds of many, warmer and drier weather could be a reason for the absence of the disease. This is

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<sup>59</sup>*The Spectator*, December 28, 1889, 918.

<sup>60</sup>*The Times*, January 10, 1890, 10.

<sup>61</sup>*The British Medical Journal*, January 11, 1890, 98.

<sup>62</sup>John Haddon, “Influenza and Pneumonia,” *The British Medical Journal*, February 15, 1890, 354.

<sup>63</sup>Robert Barnes, “Influence of the Influenza Wave on Puerperal and Menstruating Women,” *The British Medical Journal*, February 15, 1890, 356.

perfectly illustrated in a statement made in 1891: “In Yorkshire the epidemic shows signs of abating, and the brilliant weather of yesterday was, the doctors say, conducive to its disappearance.”<sup>64</sup> Parsons claimed that the weather in January 1890, which was “ordinarily in winter conducive to good health, may have rendered the epidemic milder than it would otherwise have been.”<sup>65</sup> At a meeting of the Rural Sanitary Authority of Croydon in June of 1891, Dr. Carpenter said the disease might be lessened by increasing the amount of sunlight in rooms.<sup>66</sup> On the other hand, poor weather might have negative effects on individuals. In May, 1891, *The British Medical Journal* wrote, “A full analysis of the effect of the recent change to winter weather upon the prevalence and severity of the disease is likely to yield interesting results, but it would only be possible to make such an analysis when complete returns are obtainable.”<sup>67</sup> In a report about Edinburgh, this was presented as the precise culprit: “The disease presses most severely on persons with weak chests, and, as the climate of Edinburgh is most trying to such persons, that may account for the excessively high death-rate.”<sup>68</sup> In the 1892 epidemic, on the other hand, “meteorological conditions [were the] exact antithesis to those of 1889-90. It is possible that the severe weather in January 1892,

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<sup>64</sup>*The Times*, May 14, 1891, 7.

<sup>65</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92”, 16.

<sup>66</sup>*The Times*, June 5, 1891, 9.

<sup>67</sup>*The British Medical Journal*, May 23, 1891, 1146.

<sup>68</sup>“Influenza in Edinburgh”, *The Times*, December 2, 1891, 7.

as compared with that in 1890, may have had to do with the higher mortality in the later year.”<sup>69</sup> But this relationship with cold weather was not as precise. Some felt that lower temperatures could kill the disease: “Since the disappearance of the frosty weather the influenza in Canterbury has spread with alarming rapidity. Previously the disease was prevalent; but now almost every family is more or less affected, and the local medical men find it almost impossible to meet the demands made upon them.”<sup>70</sup> There were those, however, who discredited the connection. In December 1889, Dr. W. Gordon Hogg said, “This influenza is not confined to transitions of a sudden character in the weather. It occurs in the dry north-easterly cold winds of February and March quite as much as in the capricious autumn and early winter temperatures.”<sup>71</sup> Althaus also completely dismissed the idea, saying,

It has nothing to do with meteorological conditions; advances independently of climate, season, wind and weather; and affects large masses of the population at the same time, for the following reasons: -1<sup>st</sup>. Because it has a very short period of incubation, viz., about two days. 2<sup>nd</sup>. Because men are exceedingly susceptible to infection by this particular bacillus. And, 3<sup>rd</sup>, Because the bacillus is propagated not only by persons who are ill in bed, but by many people who have the complaint in a mild form, and therefore continue to move about and pursue their ordinary avocations, thus forming focuses of infection for all those who may happen to come in contact with them.<sup>72</sup>

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<sup>69</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92”, 17.

<sup>70</sup>*The Times*, December 31, 1891, 5.

<sup>71</sup>W. Gordon Hogg, “The Epidemic of Influenza,” *The British Medical Journal*, December 21, 1889, 1418.

<sup>72</sup>Althaus, 285-286.

But those who accepted contagion could still find some way to incorporate the weather. Dr. J. Syer Bristowe, Medical Officer of Health for Camberwell, asserted, “I think it also almost certain that its contagium acts in respect of the atmosphere... namely, that it multiplies therein, and so enhances the diffusion of the disease.”<sup>73</sup> Even Parsons held a similar view: “It is conceivable that the cause of an epidemic of Influenza may be the presence in the air of an irritating material which affects different people more or less, or sooner or later, according to their different degrees of susceptibility or power of resistance: a tolerance having become established, the disease passes away.”<sup>74</sup> When it came to a direct link between the weather, though, Parsons once again fell back on the idea that it was individual observation, and not collated data, that people were using to base their theories on the weather. He wrote, “Although a good many Medical Officers of Health, in their replies to the Board’s circular, have been disposed to attribute the origin of the epidemic to weather conditions, yet those assigned have been different in different cases according to the type of weather prevailing when the locality was attacked.”<sup>75</sup> Some were cautious about the possible connection. Without denying a link, Thompson wrote, “It is at least remarkable that epidemics of influenza have frequently been preceded and

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<sup>73</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, February 6, 1892, 288.

<sup>74</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 83.

<sup>75</sup>*Ibid.*, 77.

accompanied by severe and prolonged fogs and marked changes in the weather. Here, however, as elsewhere, we are confronted by the danger of confounding cause and effect.”<sup>76</sup> In his 1893 report Parsons clarified what he believed to be the connection between the flu and the weather. He stated, “the outbreak of an epidemic of Influenza is not the effect of any particular kind of weather, but it is possible that the kind of weather accompanying the epidemic may have some influence upon its course and fatality.”<sup>77</sup> We now understand that “the influenza virus survives best at low temperatures and high humidity.”<sup>78</sup> It is clear that in the 1890s, though, they were far from understanding this causality.

Some were concerned that habits were not modified in concordance with the weather. An 1891 letter to the editor observed,

I am not at all surprised to learn that such a large proportion of members of Parliament are laid up with the influenza.

That I am one of the victims of the scourge I attribute solely to the fact that the officials at the House of Commons have been content to regulate their movements according to the almanac. Thus, during the recent north-easters we were suddenly deprived of fires and subjected to a general opening of windows, high and low – in the corridors, the tea rooms, the libraries and the news rooms, and even in the House itself – and some members, like myself, have probably only found them open after the mischief had been done.<sup>79</sup>

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<sup>76</sup>E. Symes Thompson, 426-427.

<sup>77</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 16.

<sup>78</sup>Potter, 16.

<sup>79</sup>Fredk. T. Mappin, *The Times*, May 14, 1891, 7.

This idea of habits was also used specifically to explain why the affluent were susceptible to the disease. Speaking to the Croydon Rural Sanitary Authority, Dr. Carpenter explained,

The malady was both infectious and contagious. It was taken, first of all, by persons who were out after sunset. They carried home the excessively minute micro-organisms which affected the eyes and nose to their families. If their homes were well ventilated and lighted the thing stopped; but where the infection was taken into badly ventilated and lighted, well carpeted and curtained, luxurious homes, or where the air was distinctly foul, it made all the difference. Thus, about 10 per cent. of members of Parliament were down with it, the reason being that they were out in the night air, and went back to their luxurious clubs or homes and infected their relatives.<sup>80</sup>

Of course some held the disease's detrimental effects to be partially reliant on self-inflicted causes. Thompson wrote that "Laryngitis and bronchitis were also fairly common, especially among those unable to protect themselves from atmospheric vicissitudes, or who returned too early to their work."<sup>81</sup> Parsons used the same justification to explain why people might suffer another attack of the disease: "The time at which the relapse occurs is usually from a week to a fortnight after the primary attack, and it can often be distinctly traced to an exposure to cold, or return to work before complete recovery."<sup>82</sup> *The British Medical Journal* carried a similar sentiment about the flu in Scotland, saying, "The weather in the North has been so changeable,

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<sup>80</sup>*The Times*, June 5, 1891, 9.

<sup>81</sup>E. Symes Thompson, 406.

<sup>82</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 68.

from the genial warmth recalling midsummer to almost Arctic cold in the course often of a single day, that there is little doubt the prevalence of the epidemic may to some extent be attributed to the want of proper precautions being taken against cold.”<sup>83</sup> Dr. F. Orton was of the opinion “that the impatience of modern times with regard to illness has been as large a factor with regard to death-rate in the present visitations as the complaint itself.”<sup>84</sup> In the 1891 LGB report Parsons advised that “Fatigue and exposure to changes of temperature favour the development of the disease.”<sup>85</sup> Others saw the relation to disease and the weather as quite natural and unexceptional. Dr. J. Stopford Taylor, a medical officer speaking to the Liverpool Health Committee in February 1892, stated that “the severe weather at this season of the year caused a large increase in the deaths from lung diseases.”<sup>86</sup> He was nonchalantly remarking that poorer weather brought more deaths. For others, it was the unusual nature of the weather that sparked alarm.

Connections with the weather did not magically end at the turn of the century. Though skeptical about the relationship, an article in 1918 stated, “Although the weather seems to have little bearing on the disease, the temperature generally has been abnormally high and the air humid at the outbreak of several of the epidemics, whilst

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<sup>83</sup>“Influenza in the North,” *The British Medical Journal*, January 2, 1892, 34.

<sup>84</sup>*The Times*, January 26, 1892, 6.

<sup>85</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 66.

<sup>86</sup>“The Influenza,” *The Times*, February 5, 1892, 4.

when the air becomes cold and dry the incidence of the disease is commonly reduced.”<sup>87</sup> Assessing how the disease had affected the Navy, in April 1919 Surgeon-Captain P.W. Bassett-Smith said “The increased coldness of the weather in the autumn often caused decreased ventilation, and this in the presence of a virulent strain of organism caused the autumn epidemic to be much more severe than the spring one.”<sup>88</sup> In November 1919, the medical journal *The Lancet* even predicted that another outbreak might be possible because the good weather was over: “For catarrh, season, and weather are – and with reason – associated, not only in the lay, but also in the medical, mind, with influenza.”<sup>89</sup> Even in 1929, a writer in *The Lancet* said, “Despite the fact that epidemic influenza occurs as readily in the tropics as in cold climates, all practical experience points to the danger of chill and undue exposure to cold, especially in association with exhaustion.”<sup>90</sup> This is curiously similar to what Althaus wrote decades before, in 1892: “Temperate living and care in avoiding chills are more particularly important during an epidemic of influenza, as chills and excesses of various descriptions depress the nervous system... and thus facilitate the invasion of the system by Pfeiffer’s bacillus.”<sup>91</sup> Though sometimes misguided as to the actual role the

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<sup>87</sup>“Epidemic Influenza,” *Nature*, October 31, 1918 (no. 2557, vol. 102), 166.

<sup>88</sup>“Influenza”, *The Lancet*, April 26, 1919, 712.

<sup>89</sup>“The Behaviour of Influenza,” *The Lancet*, November 15, 1919, 881.

<sup>90</sup>“The Prevention of Influenza,” *The Lancet*, March 2, 1929, 422.

<sup>91</sup>Althaus, 343.

weather played in the disease, these discussions were by far not the most fantastical.

Some theorists went as far as to say that the origins of the disease were cosmic.

In 1891 an observer named G.H. Willis wrote,

But, abnormally, just as an aerolite reaches the earth before it is consumed, so the earth may come in contact with a volume of poisonous gas of great density, some of which may find its way to the earth's surface in sufficient force to generate a disease of a malarious nature affecting the nervous system and respiratory organs.<sup>92</sup>

Others believed that the disease was omnipresent in some way or another. One person wrote, "the influenza, like the poor, is always with us."<sup>93</sup> In 1889 *The British Medical Journal* reminded readers what the esteemed Dr. Theophilus Thompson had written

In the *Annals of Influenza...* the standard work on the subject, from which recent writers, both in the medical and general press, have culled their information, some most suggestive hints are given as to the cause of the disease which, viewed in the light of modern bacteriological science, are little less than prophetic. Writing in 1851 the author adduced evidence in support of the opinion that these epidemics are produced by vegetable germs borne on the wings of the wind. He invited special attention to the disturbed condition of vegetable and animal life repeatedly recorded during influenza years.<sup>94</sup>

His son, E. Symes Thompson, said that in 1852 many had believed the disease was due to fungi, and in 1890 another suggestion had been made that was not far from this

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<sup>92</sup>G.H. Willis, *The Times*, July 10, 1891, 4.

<sup>93</sup>M.P., *The Times*, November 6, 1891, 3.

<sup>94</sup>"The Influenza Epidemic of 1889," 1363.

idea.<sup>95</sup> In a letter to the editor, one man theorized that the disease was a product of spores grown from infected feces and carried by the wind from China.<sup>96</sup> This link to China was made in 1918, too, when it was suggested in *Nature* that laborers imported from the East for the war effort may have introduced the disease.<sup>97</sup> The idea that the disease somehow was carried in the air was a common one in the nineteenth century. Reflecting on the epidemics in 1891, Dr. Parsons said, “the recurrence of epidemic influenza in 1889 seems also to have found the minds of medical men prepossessed with a belief in the atmospheric causation and non-contagious nature of the disease, this belief founded upon traditions of its previous behaviour.”<sup>98</sup> It was, in fact, a relatively widely held opinion. In December 1889 *The Spectator* reported,

It is true we avoided the cholera last time it was raging in Paris; but cholera is a very different disease from influenza. There is nothing to show that the latter follows in the wake of imperfect sanitation, or depends upon bad drains and contaminated water. More probably it is due to some extraordinary and unwholesome condition of the atmosphere.<sup>99</sup>

In 1891 the publication was uttering the same sentiment: “it must, to all appearance,

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<sup>95</sup>E. Symes Thompson, x.

<sup>96</sup>R.R., “The Spread of Influenza – A Novel Suggestion,” *The Times*, January 7, 1890, 11. By 1892 the author admitted that his theory was not valid. “The Influenza Epidemic,” *The British Medical Journal*, March 5, 1892, 509.

<sup>97</sup>“Epidemic Influenza,” *Nature*, October 24, 1918 (No. 2556, Vol. 102), 147.

<sup>98</sup>H. Franklin Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” *The British Medical Journal*, August 8, 1891, 304.

<sup>99</sup>*The Spectator*, December 28, 1889, 918.

come through the air, or it could not strike ships at sea as it does.”<sup>100</sup> And it was not only lay journals that said this. In the same month *The British Medical Journal* wrote, “That the specific cause is, as a rule, carried in the air is highly probable, and we may be content to speak of it as a miasm.”<sup>101</sup> In February 1890 a prison doctor wrote, “the outbreaks in the two prisons were practically simultaneous, and at points far apart from each other... All this would appear to point strongly, if not conclusively, to some general cause, and to signify that the contagion was in the air, and was not imported by one case and passed on rapidly to all the others.”<sup>102</sup> R. Bruce Low recorded the idea that it could have been carried on the air to Lincolnshire, “borne by the wind across the sea.” As proof that this could happen, a resident named Mr. Cordeaux told him that “last summer millions of dragon flies were blown across from the Continent to the Lincolnshire coast and Spurn Point.”<sup>103</sup> In May of 1891 a letter to the editor argued that men from Sheffield brought “from their native town some air charged with epidemic properties, which straightway implanted into our London atmosphere the condition necessary for the spread of the disease.”<sup>104</sup> Dr. Frank Nicholson wrote, “I

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<sup>100</sup>“The Influenza,” *The Spectator*, May 23, 1891, 718.

<sup>101</sup>“Epidemic Influenza,” *The British Medical Journal*, December 7, 1889, 1291.

<sup>102</sup>R.F. Quinton, “An Epidemic of Influenza in a Prison,” *The British Medical Journal*, February 22, 1890, 417.

<sup>103</sup>Low, 241.

<sup>104</sup>Farquharson, 5.

incline to the belief that influenza is not infectious but due to some impurity, probably chemical, in the air, which appears to affect the nervous system most powerfully.”<sup>105</sup>

J. Dix of the Sculcoates Union Workhouse said “The origin of the attack was, as far as I know, spontaneous.”<sup>106</sup> In a report to the LGB, Dr. Hunt of the Fir Vale Workhouse believed “the epidemic [was] non-contagious,” but instead was “due to atmospheric or miasmatic influences.”<sup>107</sup> Dr. Hunt had his reasons, but this type of belief could be dangerous given the close proximity of others in these types of institutions. It could have been a justification for those unable or unwilling to alter the conditions in which these facilities operated. But the belief in the non-contagious nature of the disease could also, in general, inspire fatalism, as one article noted:

The idea popularly held that influenza is an airborne disease has probably done much to prevent a careful examination of many outbreaks of the malady, for it is naturally held by many believers in a general aerial infection that, as the only way out of the air is into the grave, therefore the possibility of contagion from one individual to another may well be neglected if the whole atmosphere is infected.<sup>108</sup>

Some thought it could travel through several mediums. Surgeon T.B. Franklin Eminson wrote that “it is necessary to suppose that under some circumstances the

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<sup>105</sup>Nicholson, “The Complications and Sequelae of Influenza,” 1275.

<sup>106</sup>J.Dix, “Report on Influenza in the Sculcoates Union Workhouse, Hull, 1891” in H. Franklin Parsons, *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 56.

<sup>107</sup>“The Influenza Epidemic in the Fir Vale Workhouse,” *The British Medical Journal*, July 4, 1891, 43.

<sup>108</sup>*The Times*, May 22, 1891, 14.

influenzal poison can change its habitat from the atmosphere to polluted soils and sewers, for it is now beyond reasonable doubt that the outbreak of pneumonia at Scotter in 1890 was chiefly due to sewer emanations.”<sup>109</sup> There were also related beliefs held by minorities on the fringes, such as the theory “that the air was poisoned by Satan.”<sup>110</sup> Parsons dismissed origin theories like this by saying,

A circumstance which is frequently adduced in favour of the atmospheric origin of Influenza is the fact that the first sufferers in a locality or household are often persons who in their daily occupations are exposed to the open air... But on the other hand the going about in the open air means, in the case of most people, more frequent opportunities of coming in contact with infection than fall to the lot of people who stay at home.<sup>111</sup>

There were still other theories to address.

Some chose to believe that the disease was always present, and simply took the right conditions to appear. On December 14, 1889, *The British Medical Journal* hypothesized,

Epidemic prevalence may, in accordance with Pasteur’s hypothesis, be connected with special conditions of oxidation, etc., suited for the extensive development of an organism usually prevalent only in a sporadic form, just as in South Africa the country is covered every eight or ten years with a flower sparsely, if at all, seen during the interval. The plants, indeed, are present, but are unnoticed because the flower does not come to perfection; so the anthrax bacillus can only produce its spores when the

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<sup>109</sup>T.B. Franklin Eminson, “Influenza in North Lincolnshire,” *The British Medical Journal*, June 13, 1891, 1276.

<sup>110</sup>Sisley, *Epidemic Influenza*, 9.

<sup>111</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 73.

temperature is suited to its full development.<sup>112</sup>

One doctor wrote, “I conclude influenza is an endemic in and about London, and that it is the same disease which now prevails on the Continent in a more severe type... It has increased in severity, in my experience, during the past ten years, and this year’s epidemic is the most severe I have seen.”<sup>113</sup>

While these theories of spread have not held up to the scrutiny of modern medicine, some were closer to the mark than others. We now know that the disease is communicated person to person, and there were those in the 1890s who believed this. In a speech given to the Society of Medical Officers of Health in January 1892, Dr. Richard Sisley said,

an epidemic of influenza is a serious national disaster, and... if we know how the disease is spread, it is of importance that this knowledge should be put to some practical use... the mode of spread of influenza has been carefully studied, and it is proved beyond doubt that (1) the first case of influenza in a town is often a patient who has come from an infected place; ... (3) influenza spreads along the lines of human intercourse.<sup>114</sup>

Sisley did not hide his convictions about the disease, stating in his 1891 book that “I hold, not only that influenza is contagious, but also that it is chiefly, if not entirely, spread by contagion.”<sup>115</sup> Collecting a large amount of data from the recent epidemic, Sisley presented his case for contagion, summing up with the statement, “In the

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<sup>112</sup>“The Influenza Epidemic of 1889,” 1363.

<sup>113</sup>Hogg, 1419.

<sup>114</sup>*The Times*, January 20, 1892, 14.

<sup>115</sup>Sisley, *Epidemic Influenza*, 33.

epidemic of 1889-1890 I have been unable to find a single instance in which there was a sudden infection of a large number of people without the previous existence of isolated cases of the disease.”<sup>116</sup> Sisley was not the first, nor was he alone in this belief. Before the epidemic reached Britain, in 1889 one doctor wrote, “As to its extremely infectious nature I have no shadow of a doubt, and I say this while being fully aware of the risks of fallacies, and of reasoning from imperfect or ill-observed data.”<sup>117</sup> Many doctors adopted this view in the 1890s. In January 1892, Dr. J.W. Hunt said, “Several cases seem most distinctly to prove that the disease is directly contagious from one to another.”<sup>118</sup> And the idea of contagion trickled outside of the medical community. Even *Punch* seemed to agree with the theory of contagion. “An Influenza Song” begins with a healthy household of occupants, but then the “Father has a cough,” and by the end “There’s my eldest Brother down, With a pain all round his head, Ah! I’m the only one who’s up – Oh! ... Oh!.... I’ll go to bed! So – we’re all coddlin’, Cod, cod, coddlin’.”<sup>119</sup>

But some disagreed with the idea that the disease traveled person to person, especially before Parsons’s first report was published in mid-1891. Thompson was one of these doubters. He challenged the idea because “The fact that the disease does

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<sup>116</sup>Ibid., 86.

<sup>117</sup>Hogg, 1418.

<sup>118</sup>“Influenza,” *The British Medical Journal*, January 9, 1892, 77.

<sup>119</sup>“An Influenza Song,” *Punch*, February 20, 1892, 93.

not spread more rapidly now than of yore, in spite of the present rapid methods of transit, and the fact, too, that it does not necessarily spread along the main lines of travel, suffice to demonstrate the fallacy of the assumption of the disease being spread principally by contagion.”<sup>120</sup> Robert Farquharson agreed: the “epidemic does not follow the lines of human intercourse, but spreads rather like a huge pestilential wave over the surface of the countries, and, what is especially worthy of note, it travelled with equal rapidity 100 years ago, when the intercourse between different parts of the globe was as slow and occasional as it is now rapid and regular<sup>121</sup>.” Farquharson’s conclusion was probably based on the peculiar nature of the disease, since the author also states, “The attacks are often curiously capricious in their mode of selection; at others they seize whole families with a suddenness strongly suggestive of epidemic influence, whilst some people seem to bear charmed lives, and go out, in, and among their smitten friends without ever catching anything on their own account.”<sup>122</sup> A letter to the editor on that same day posed the question of whether the disease traveled on the wind, or whether it could also travel on a steamship independently of any breeze.<sup>123</sup> Even where the cases suggested contagion, some were still skeptical that the disease needed

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<sup>120</sup>E. Symes Thompson, 467.

<sup>121</sup>Farquharson, 5.

<sup>122</sup>Ibid.

<sup>123</sup>*The Times*, January 6, 1890, 10.

direct personal contact. In his report to the LGB Dr. D. Helston recorded that on ships stationed at Ireland Island in Bermuda the disease first jumped from ship to ship and then to the island. But he was sketchy when it came to the issue of contagion:

The disease attacked the ships in succession, appearing first on board those in close contact with “Saga.” It did not assume an epidemic form among the residents on Ireland Island until it had ceased an epidemic on board ship. The disease seemed to spread more by epidemic influence than by contact with patients, and no case originated at the R.N. Hospital where all the worst cases were sent for treatment.<sup>124</sup>

In 1891, a Dublin doctor submitted his theory that special wind currents ferried the disease across the globe.<sup>125</sup> Some fell back on a mixture of everything. In February 1890 a doctor wrote to *The British Medical Journal*, saying,

As to the mode of propagation of influenza, opinions seem to be considerably divided on that point. My experience of the last epidemic would lead me to think that the atmosphere is the most effective vehicle for conveying that disease, but that it can also, although not in a high degree, be transmitted by infection, as in the clothing, etc., and also by contagion from person to person.<sup>126</sup>

To those who were well versed in the disease, these observations came as no surprise. Althaus used scientific evidence to disprove the theory about wind, since “In all these outbreaks it has been noticed that the epidemic progressed in the Northern hemisphere

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<sup>124</sup>The National Archives, “Influenza on the ship *Bellerophon* (1890),” (London, England: CO/37/221/26, 1890).

<sup>125</sup>John William Moore, *The British Medical Journal*, May 9, 1891, 1036.

<sup>126</sup>P.Z. Herbert, “The Respiratory Complications of Influenza,” *The British Medical Journal*, February 22, 1890, 419.

in a direction from east to west, that is, contrary to the prevailing surface winds.”<sup>127</sup>

But the issue remained unsettled; these findings were unconvincing to the holdouts. Even Parsons’s report collected a difference of opinions concerning contagion. In one section Dr. Thompson, medical officer of health for the West Herts Combined Districts, discussed the different opinions he had collected:

Dr. Perigal, of New Barnet, writes, “I have not been able to satisfy myself that it is contagious, i.e., communicable; in two out of about 50 cases it *may* have been; several husbands having it *severely* were nursed by their wives, who did *not* contract it.”..On the other hand, Dr. Thyne, of Barnet, reports that “but few escape when once it has entered a house; one finds as many as eight or more individuals in a household all suffering at the same time.” Dr. Steele, of Hemel Hempstead, says “it is decidedly infectious.”.. [while Dr. Thompson thought] the epidemic appears to me to have occurred too simultaneously throughout my districts to be accounted for by the theory of infection by human agency alone.<sup>128</sup>

In another, Dr. Tatham, Medical Officer of Health for Manchester, wrote, “The question as to whether the spread of this disease was chiefly due to direct personal infection, or to causes in great measure external to the body, is still *sub judice*.”<sup>129</sup>

Some would not commit to a side while still half-heartedly aligning themselves with the official view. Sir Douglas Maclagan wrote, “Notwithstanding the strong and important statements of Parsons, Buchanan, and others, I have still my doubts as to its spreading by infection in the ordinary sense. But as this is matter of doubt, and I fancy

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<sup>127</sup>Althaus, 295.

<sup>128</sup>Dr. Thompson, “Report,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 269.

<sup>129</sup>Tatham, 284.

that professional opinion is in favour of the theory of infection, it is better to err on the safe side and practise isolation.”<sup>130</sup>

For those who had made up their minds, when colleagues hesitated they could find it quite irritating. Sisley mocked the nonbelievers by saying, “In England, on the contrary, the veterinarians were in advance of the medical profession, at any rate having long since recognised the specific and communicable character of influenza.”<sup>131</sup> This was because for years veterinarians had held that so-called “horse influenza” was contagious amongst equines, and the healthy animals had been separated from others that fell ill. These arguments over the nature of the disease could be frustrating not only to those who were convinced that the disease was contagious but also to those who were still undecided. In January 1892 a columnist for *The Spectator* wrote,

It certainly travels through the air, for it strikes ships still at sea, and appears in a hundred places at once, and there is ground for believing, we are told, that its victims are ‘poisoned by the entrance of a living organism into the body, either through the mouth, or, as some evidence would suggest, the eyes;’ but nothing is certain, and until there is certainty there can be no preventive, which, and not cure, should be the national object of search.<sup>132</sup>

Others agreed that it was time for the scientific community to do something: “Sanitary science during the last half-century has won so many triumphs over infectious diseases, has learnt so well how to diminish the severity and extent of epidemics which it does

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<sup>130</sup>“Clinical Aspects of Influenza,” 287.

<sup>131</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 27, 1892, 453.

<sup>132</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

not yet know how to suppress altogether, that the public are beginning to demand that it should seriously attempt to grapple with the disease which we in this country have elected to know by the name of influenza.”<sup>133</sup> Sisley presented evidence showing that the Germans and Austrians did not believe in contagion, and that the French had used their imaginations to come up with theories.<sup>134</sup> He wrote, “From France, then, we have on the one hand philosophical speculations by M. Colin and others in favour of an almost instantaneous unexplained aerial contamination, and, on the other hand, we have carefully observed facts in favour of the spread of influenza by contagion. I prefer to accept the facts.”<sup>135</sup> There was a plethora of other theories that one could subscribe to. Sisley listed comets, volcanic eruptions, “Electrical conditions of the air,” and ozone levels, among others, as false sources of the disease that were accepted in the past and in his day.<sup>136</sup> There really was no limit to the creativity unleashed in the attempt to discern an origin for a disease that people had long dealt with but knew little about. And though it was widely discussed, there was no consensus on the method of spread, either. Parsons was clear in his beliefs:

we may dismiss with Sir Thomas Watson the idea that it is the direct result of season, climate, or weather. We may also, I believe, look upon as mythical the old notions already alluded to of the epidemic progressing

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<sup>133</sup>“Concerning Influenza,” *The British Medical Journal*, January 23, 1892, 183.

<sup>134</sup>Sisley, *Epidemic Influenza*, 24-25.

<sup>135</sup>*Ibid.*, 61.

<sup>136</sup>*Ibid.*, 9-10.

from place to place with a speed outstripping human communications... Nor does it appear to attack persons debarred from any communication with their fellows... I regard human intercourse as the essential factor in the spread of the disease.<sup>137</sup>

Parson's findings pushed them one step closer to consensus, and they were a boon for people who believed in the contagious nature of the disease. Sisley boasted, "I fear I may be accused of an insular pride when I express my satisfaction that this important truth has been again clearly asserted, chiefly by the observations of my own countrymen, and in my own country."<sup>138</sup> But Parsons also admitted that

there are irregularities in the behaviour of the disease difficult to reconcile with the view that the disease is propagated solely direct from person to person, and which lead me to think that co-operating circumstances of some kind are necessary for it to take on an epidemic form, and that some form of mediate infection is possible. What those circumstances are, and what the medium may be... are questions which I shall be grateful for your assistance in answering.<sup>139</sup>

Parsons claimed that the idea of contagion had "gained ground," and that "Others indeed go so far as to consider that the disease spreads solely by direct communication."<sup>140</sup> How many people this consisted of is unclear. Though there were some frontrunners, a single theory did not take hold in the 1890s.

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<sup>137</sup>Parsons, "The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales," 307.

<sup>138</sup>Richard Sisley, "A Study of Influenza; and the Laws of England Concerning Infectious Diseases," *The British Medical Journal*, January 23, 1892, 168.

<sup>139</sup>Parsons, "The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales," 308.

<sup>140</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 86.

While this was a hot button issue in the 1890s, there were those who believed the dispute should have been resolved years before. In 1891 one London doctor described the cyclical nature of knowledge about the disease when he wrote his defense of the belief that influenza truly *was* infectious: “This view is no new one, but the progress of the disease is so erratic that its infectiveness has to be proved anew to every generation.”<sup>141</sup> *The British Medical Journal* carried a similar sentiment in January 1892: “The theory that influenza is mainly if not entirely spread by contagion is no new one, but this idea has needed to be born again.”<sup>142</sup> The loss of knowledge about an ailment after it subsided was nothing new then when doctors experienced a similar phenomenon after this earlier pandemic. But even after so many high profile medical authorities had pronounced influenza to be communicable from one person to another there were still practitioners who held on to their beliefs. F.L. Nicholls of Fulbourn wrote, “I do not think there is any doubt about the disease being atmospherically infectious, but I have great doubts about its being personally contagious.”<sup>143</sup> Althaus thought these ideas were ridiculous, since

the way in which this disease begins, pursues and finishes its career, is so peculiar, and so evidently under the control of certain definite laws, that it seems difficult to misunderstand them. Yet even now we hear much of an ‘air-borne miasma or contagion,’ just as in former years plague, cholera, yellow fever, small-pox, and even hydrophobia, were believed to

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<sup>141</sup>*The Times*, May 22, 1891, 14.

<sup>142</sup>“Concerning Influenza,” 183.

<sup>143</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 20, 1892, 408.

be caused and spread by morbid atmospheric conditions.<sup>144</sup>

Sisley challenged the logic of the belief that it was atmospheric, writing, “According to the ‘aërial contamination’ theory, it is impossible to conceive how it is that influenza does not affect small villages in its course through the air from one town to another, or why villages should be affected later than towns.”<sup>145</sup> But most of the incorrect thinking was not based on the big picture, the macro level, but rather it was based on personally observed data. As Nichols wrote, “no isolation has been in any case practised, and yet the disease has not spread.”<sup>146</sup> There is an assumption that knowledge builds on its foundations; that it continues to progress over time. That was not the case in the British experience of influenza pandemics. In this matter knowledge had to be rediscovered.

Many views were colored by experiences with other maladies. In January 1892, Frank G. Clemow wrote, “The popular mind has failed to grasp the fact that influenza is in the same category of diseases as scarlet fever, measles, or smallpox.”<sup>147</sup> His purpose was to illustrate the seriousness of the flu, which, in his opinion, was treated much more lightly than these other afflictions.<sup>148</sup> Certainly people were unsure

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<sup>144</sup>Althaus, 284-285.

<sup>145</sup>Sisley, *Epidemic Influenza*, 89.

<sup>146</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 20, 1892, 408.

<sup>147</sup>Frank G. Clemow, *The Times*, January 25, 1892, 7.

<sup>148</sup>*Ibid.*

of whether this connection actually held true. One writer considered this when pondering the issue of contagion, saying that with typhus, measles, and scarlet fever, if one

enters the room of a patient suffering from either of these diseases, his chances of escape are very slight. Actual contact is not required, but something is floating in the air which communicates itself to him, and, after the proper period of incubation, he too sickens and passes through his cycle of feverish disturbance, for better or worse.<sup>149</sup>

For some, making this comparison to other diseases was the only way to know anything about something they knew little about. The 1891 LBG report said, “These characters observed in the extension of epidemic Influenza would appear to be little else than we are familiar with in the behaviour of other diseases, of the infective class.”<sup>150</sup> Sisley also used this explanation of comparing it with other diseases to show that it was contagious: “In every case where the course of the disease was studied with care it was seen that it spread in the same way as any other contagious disease.”<sup>151</sup> He defended this idea by saying, “Men of science are not dogmatic on any belief which is arrived at by analogy, however strong the analogy may be. On the other hand, in the absence of definite and absolute proof, it is not right to ignore any facts which may help us to see what is the most likely explanation of an obscure phenomenon.”<sup>152</sup> Even

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<sup>149</sup>Farquharson, 5.

<sup>150</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, x.

<sup>151</sup>Sisley, *Epidemic Influenza*, 87.

<sup>152</sup>*Ibid.*, 16.

the Local Government Board, in its 1892 memorandum, compared it to these other diseases. It used them to illustrate the nature of influenza: “Having, as would seem, something like a third part of the incubation time proper to small-pox, measles, or typhus, Influenza has correspondingly rapid ability to reproduce itself; can, that is, give rise to some thousand attacks in the time that small-pox or typhus had taken to produce ten.”<sup>153</sup> It also compared their properties to describe why the measures used to prevent or treat these other diseases would not work with influenza: “Early isolation precautions, applicable perhaps to children suspected to have measles, cannot well be applied to persons suspected of Influenza among the bread-winners of a community.”<sup>154</sup> As this quote shows, influenza was much more far reaching than something like measles, and given this aspect, it would have been impractical to quarantine people because it involved a serious financial sacrifice to apply these measures, especially when there was not definite benefit in doing so. Althaus agreed, writing,

Theoretically, no doubt, isolation would be a perfect prophylactic, but, seeing the immense number of persons who are habitually affected in an epidemic and also the comparative mildness of the symptoms of many sufferers, it would require Draconian severity to carry out such provisions, and might indeed paralyse the whole business and industry of the country for some months. The attempt to shut up thousands of men of business who have to earn their own and their families’ living, simply because they have a slight attack of influenza, might lead to a revolution, and would

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<sup>153</sup>The National Archives, “Precautions against Epidemic Influenza,” (London, England: MH 113/29, 1892), 2.

<sup>154</sup>*Ibid.*, 1.

eventually tend to make the law ridiculous.<sup>155</sup>

Many comparisons between the flu and other fevers were made.<sup>156</sup> In 1892 Surgeon E.R. Haines Cory wrote, “in tropical regions there is to all outward appearance no difference between influenza and malarial fever.”<sup>157</sup> R. Ruttle declared that “Influenza is a fever and must be treated on the same principle as typhoid or scarlet fever.”<sup>158</sup> Despite the contentious nature of these claims, some of the same medicines used to treat the other diseases, like quinine and antipyrine, were used to treat the flu. There was some belief that a comparison to other diseases might better the understanding of influenza. E. Symes Thompson wrote, “It is by explaining the laws obeyed by the most simple affections of this class, that we may most reasonably expect to elucidate those which are apparently dependent on more complicated conditions.”<sup>159</sup> Others, like Althaus, used similar ailments to justify his theories: “To that question I can only reply by point to analogous facts which have long been known, showing the existence of elective affinities of other poisons to other portions of the nervous system.”<sup>160</sup>

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<sup>155</sup>Althaus, 338-339.

<sup>156</sup>*The Times*, February 4, 1890, 5.

<sup>157</sup>E.R. Haines Cory, “Scarlet Fever or Influenza,” *The British Medical Journal*, June 18, 1892, 1340.

<sup>158</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 13, 1892, 357.

<sup>159</sup>E Symes Thompson, viii-ix.

<sup>160</sup>Althaus, 78.

When all else failed, when there were no answers to be found, it was all they had to fall back on: ‘It may be said that in this we have only what we are accustomed to witness with other diseases admittedly spread by infection from person to person, as small-pox, scarlet fever, and measles.’<sup>161</sup>

At times the discussion of influenza revolved around class. In 1889 one doctor wrote, “It attacks the so-called middle and upper classes most severely.”<sup>162</sup> In January 1890 *The British Medical Journal*’s Liverpool correspondent concurred, stating, “the upper and middle classes seem to have furnished a large proportion of the sufferers.”<sup>163</sup> In 1892 the upper levels of society were still the accepted originators in the spread of the disease. Dr. Charles Scott of Twickenham said that “At first the disease appeared to attack especially the well-to-do class; it appears to be now spreading amongst the poor.”<sup>164</sup> Parsons had a perfectly logical explanation for why this was so. In his first LGB report he argued that this class based selection was due “to persons of this class going about more,” or because “the medical advice [was] more frequently called in by them than by poorer people.”<sup>165</sup> He reiterated this in an article for *The British Medical*

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<sup>161</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 49.

<sup>162</sup>Hogg, 1418.

<sup>163</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 18, 1890, 147.

<sup>164</sup>“Influenza,” *The British Medical Journal*, January 9, 1892, 77.

<sup>165</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 91.

*Journal*, published soon after the report, by saying, “Which class was attacked first appears to have depended upon which had most opportunities of coming in contact with other persons.”<sup>166</sup> But Parsons was not the only one who thought this answered the mystery. He recorded that “the medical of health for Shoreditch states that in the poorer districts persons attacked by disease do not keep indoors until absolutely compelled to do so, and do not consult a medical man until the early and distinctive stages of Influenza have passed, and bronchitis or pneumonia has resulted.”<sup>167</sup>

Accepting this realization – that the disease was indiscriminate – could breed a feeling of hopelessness. *The Spectator* stated, “The well-nourished, the well-lodged, the well-attended are, if anything, more liable to it than the half-starved denizens of odoriferous slums. That is a very bad peculiarity of influenza, for it is an irremediable one... we cannot do anything hygienic for healthy houses, well-fed, well-clothed, and well-exercised men, or women who are lapped in scientific care.”<sup>168</sup> For while other diseases “usually strike the poor first, because the poor are exposed to the foul gases of the sewers, are too much huddled together, and are weakened by privation and exposure... the influenza is like rain, and falls upon all alike.”<sup>169</sup> This despair was

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<sup>166</sup>Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” 305.

<sup>167</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 56.

<sup>168</sup>“The Influenza,” *The Spectator*, May 23, 1891, 718.

<sup>169</sup>“The Moral Effect of the Epidemic,” *The Spectator*, January 23, 1892, 115.

especially true for those who were dispirited by the lack of solutions coming from the medical community. A newspaper article stated, “We know nothing whatever about it, except that healthy living, good shelter, and perfect hygienic drainage do not protect us in the least, the heir to the Throne dying of it just as readily as the lowest costermonger.”<sup>170</sup>

Much of what was being discussed about the flu fell into the category of speculation. This was not due to a dearth of writing or observation on the topic. In fact, the multitude of information available may have been detrimental to an overall understanding of the disease. In one respect it was an issue of quantity overriding quality. This proliferation of beliefs was due to the variety of observations made and recorded on the flu. If more than one individual had similar findings, it lent some validity to the theory, but if only one person observed something, it spawned a new theory. When the pandemic erupted in 1889 the scientific and medical community found itself on the cusp of change. New ideas were challenging old methods, and though the old techniques were increasingly revealing their shortcomings, they were not eliminated.

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<sup>170</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

### Chapter III - British Medical Knowledge of the Flu – Science

Much of the medical knowledge between the epidemics of the 1890s and those in the late 1910s remained unchanged, with one key exception. In 1892 the scientific community was thrown a red herring. On January 5<sup>th</sup>, *The Times* announced that in Berlin, Dr. Richard J. Pfeiffer, a researcher and son-in-law of Professor Robert Koch, had discovered the “Influenza Bacillus.” In other words, he had purportedly found the cause of the disease in the form of a bacterium he had isolated. He was not the first to make such an announcement. In the atmosphere of the pandemic everyone wanted to find the culprit, and there had been others before him. On January 22, 1890, news reached Britain that the Vienna papers were reporting that Dr. Jolles, a former student of Robert Koch, had discovered the influenza bacillus in the water supply. At the same time, another man, Dr. Weichselbaum, was simultaneously claiming to have discovered the bacillus. The story continued on January 25<sup>th</sup>, when it was reported that Dr. Jolles’s claim had yet to be substantiated because the bacillus had not been shown to produce the flu, and there were now even more contenders to the discovery. In early February Professor Weichselbaum explained that he and Jolles had found two different bacilli, but he was hesitant to wholeheartedly acknowledge that the one he discovered, let alone the one that Jolles found, was the true cause. According to *The Times*, “The lecturer expressed the opinion that influenza may be caused by a microbe as yet unknown, and that the complications of the disease may be due to the micro-

organism of pneumonia finding comfortable conditions of culture in the diseased body.”<sup>1</sup> Thompson was skeptical, too, saying, “Notwithstanding the sensational announcements which from time to time found their way into the public press, it is more than doubtful whether the relationship of any particular microorganism, or organisms, to influenza has been satisfactorily proved.”<sup>2</sup> And in 1891 Parsons reported,

A perusal of the conflicting statements of these different observers inclines one to think that the microbe (if there be one) which is the essential cause of epidemic Influenza has not yet been discovered, and that the forms which have been identified in the sputa of patients or the lungs of fatal cases are either accidentally present or are connected with the occurrence of secondary affections for which the attack of Influenza had prepared the soil.<sup>3</sup>

As one might expect from the statements above, these earlier suspects never took hold. In May 1891, one writer said, “Members of Parliament prate glibly about microbes, but, so far as I can learn, nothing of the kind has yet been found in connexion with influenza, and some authorities consider it a nervous disorder, whilst others hold that it is malarious in origin and closely allied with the ‘dengue,’ or breakbone fever of the East.”<sup>4</sup> In July, 1891, in a speech given at the annual meeting

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<sup>1</sup>*The Times*, February 4, 1890, 5.

<sup>2</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), 412.

<sup>3</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 69.

<sup>4</sup>Robert Farquharson, *The Times*, May 19, 1891, 5.

of the British Medical Association, physician Sir Peter Eade said, “although Drs. Jolles, Weichelbaum, and others have claimed to have defined and differentiated the bacillus of influenza... I fear we are unable to say that its special identification is yet assured.”<sup>5</sup> When Sisley composed his book in 1891, he did not even bother to write about these findings, saying, “It would be both useless and tedious to record here the observations which have been made by bacteriologists, for their search has not been successful, and a record of their failures is unnecessary... Scientific experiments thus advertised before they are confirmed only bring science into ridicule and contempt.”<sup>6</sup>

In general this was not the type of sentiment uttered after Pfeiffer’s supposed discovery. Pfeiffer conclusively stated, “I consider myself justified in pronouncing the bacilli just described to be the exciting causes of influenza.”<sup>7</sup> *The British Medical Journal* was skeptical at first, recording that

None of these researches have been confirmed by other scientific workers, and the atmosphere of doubt that envelops the results of Dr. Pfeiffer’s experiments can only be cleared away by a careful examination of the details. Six successful inoculations cannot be accepted as conclusive proof that the real cause of so rapid and so contagious a disease as influenza has been discovered.<sup>8</sup>

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<sup>5</sup>Sir Peter Eade, “Influenza in 1891,” *The British Medical Journal*, August 8, 1891, 308.

<sup>6</sup>Richard Sisley, *Epidemic Influenza: Note on its Origin and Method of Spread* (London: Longmans, Green, and CO., 1891), 13-14.

<sup>7</sup>R. Pfeiffer, “The Influenza Bacillus,” *The British Medical Journal*, January 16, 1892, 128.

<sup>8</sup>“The Bacteriology of Influenza,” *The British Medical Journal*, January 9, 1892, 84.

That proof came a week later, when *The British Medical Journal* published both an advance paper by Pfeiffer and another by his associate Dr. S. Kitasato. Kitasato was also certain that “the present bacillus, so extraordinarily characteristic in its cultures, and so easy to be recognised, has not come within my experience except in influenza patients.”<sup>9</sup> The authenticity of these findings was no doubt fortified by Dr. E. Klein of St. Bartholomew’s Hospital, who confirmed Pfeiffer and Kitasato’s findings with his own experiments.<sup>10</sup> In his 1893 report to the Local Government Board [LGB], Klein stated, “These statements and observations of Pfeiffer and Kitasato are very definite, and if confirmed would afford strong reason for believing that in these bacilli we had found the special microbe of Influenza. ... we have arrived at the conclusion that the particular bacilli as described by them ought to be regarded as the specific microbe of influenza.”<sup>11</sup> In Klein’s opinion the only area to explore before completely confirming Pfeiffer’s discovery was to be certain that the bacillus was not found in any other disease.<sup>12</sup> In notes given to Parsons, Dr. Caldwell Smith of Glasgow said, “I have not the slightest doubt that this disease is caused by the bacillus discovered by Pfeiffer. ...

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<sup>9</sup>S. Kitasato, “On the Influenza Bacillus and the Mode of Cultivating It,” *The British Medical Journal*, January 16, 1892, 128.

<sup>10</sup>E. Klein, “Some Remarks on the Influenza Bacillus,” *The British Medical Journal*, January 23, 1892, 170-171.

<sup>11</sup>Dr. Klein, “Report on Influenza, in its Clinical and Pathological Aspects,” 116.

<sup>12</sup>*Ibid.*, 140.

It is to the life history of Pfeiffer's bacillus that we must direct our attention if we wish to understand the seemingly strange vagaries of the disease."<sup>13</sup> For contemporaries Pfeiffer seemed to have the proof on his side, and his "discovery" became widely accepted as scientific fact. Althaus wrote,

In the first edition of this book I stated, indeed, that everything bacteriological in connection with grip was then quite unsettled... Two months after I had penned those lines the researches of Pfeiffer, Kitasato, and Canon were published, throwing a new light on the subject; and, although it might be premature to say that the bacteriology of influenza has been definitely established, there can be no doubt that we have advanced a considerable step further on the road to the satisfactory solution of this question.<sup>14</sup>

And there was apparently enough scientific investigation to convince the medical community at large. The second edition of Althaus's book was written only three months after Pfeiffer's announcement. Contrary to *The British Medical Journal's* original criticism, Pfeiffer *had* taken the time to extensively study subjects. According to *The Times*, in 1889 in Berlin 8,000 cases of influenza were studied, with researchers concluding that it was caused by a bacillus. When it appeared once again in September 1891, Berlin's Royal Institute for Infectious Diseases opened a clinic to study patients. "The result" of this experiment "was the discovery in the matter discharged from the patients' lungs of a bacillus which is found in no other cases of

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<sup>13</sup>H. Franklin Parsons, "A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92," in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty's Stationary Office, 1893), 48.

<sup>14</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> Edition, (London: Longmans & Co., 1892), 3.

disease of the respiratory organs.” Pfeiffer took this bacillus and injected samples of it into monkeys and rabbits, which supposedly resulted in the flu in every case.<sup>15</sup> People like Althaus did not have enough patients to study, but “Pfeiffer, on the other hand, had so many cases at his disposal that there could be less difficulty in arriving at a satisfactory explanation of the facts observed.”<sup>16</sup> Sisley likewise lamented that

Bacteriology is a comparatively new science, one which requires for its study not only time, skill, and patience, but an elaborate apparatus. For these reasons the investigation of the ultimate causes of disease cannot be carried on by those engaged in active practice. From this it unfortunately follows that those who have the best opportunities for observing disease have the least chance of studying its cause. A division is thus formed between many of those who study the practical and those who study the theoretical side of medicine. My reason for mentioning this fact is because I feel that its effects are far reaching and disastrous.<sup>17</sup>

In the following days Pfeiffer would explain his findings, and for decades his bacillus would be held as the organism responsible for influenza. It was such a unique organism that “the bacilli of grip can thereby alone be distinguished with certainty from other bacteria.”<sup>18</sup> The true culprit would go undetected until 1933, years after the conclusion of the last major flu pandemic, in 1919.

But even finding a bacillus that most were convinced was the agent of influenza still did not solve all of influenza’s mysteries, for though they may have

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<sup>15</sup>*The Times*, January 8, 1892, 3.

<sup>16</sup>Althaus, 8.

<sup>17</sup>Sisley, *Epidemic Influenza*, 16-17.

<sup>18</sup>Althaus, 5.

agreed (or sometimes not) on Pfeiffer's conclusions, the subsequent question concerned how the bacillus worked. This was something that was discussed even before Pfeiffer announced his findings. In January 1890, J.R. Gasquet proposed, in a letter to *The British Medical Journal*, "May it not, however, be true that such bacterium or bacillus acts not directly, but by producing some gaseous substance, which is the immediate cause of the disease? The action of a gas seems far more in accordance with the way in which an epidemic of influenza spreads than that of any solid body, organic or inorganic."<sup>19</sup> And once Pfeiffer *had* made his announcement, there were still holes in their collective knowledge. Lay periodical *The Spectator* asked its readers not to get too hopeful about Pfeiffer's discovery: "Dr. Pfeiffer's discovery of an influenza bacillus does not help the world in the least, for granting the carefulness of his experiments, and the accuracy of his inductions – and we should be slow to grant either, after the insignificant result of the Koch craze – the existence of a microscopic worm in a diseased lung neither tells us how it got there, nor how to get it out."<sup>20</sup>

There was considerable talk in the 1890s of how the disease operated, summed up in the concept of the "influenza poison." Parsons said, "It would appear as if a certain degree of concentration of the Influenza poison were necessary in order for the disease to take on an epidemic form. We may compare it to a fire kindled in a pile of

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<sup>19</sup>J.R. Gasquet, *The British Medical Journal*, January 4, 1890, 47.

<sup>20</sup>"The Influenza," *The Spectator*, January 16, 1892, 82.

green wood: if the fire be small it will die out; but if a large fire be made to burn, it will propagate itself through the green wood, first drying and then consuming it.”<sup>21</sup> He explained this more in his 1893 report, saying, “A person of ordinary powers of resistance may escape serious harm from a small dose of the Influenza poison... but will succumb to a large dose or to a prolonged exposure.”<sup>22</sup> In a January 1890 article, *The British Medical Journal* wrote, “The poison of influenza, having entered into the system, does not always attack the mucous membranes of the nose and chest. In some persons it is the stomach and digestive organs which are attacked.”<sup>23</sup> In 1891 Sir Peter Eade wrote, “In this year, as in the last, the special influence of the influenzal poison appears to have been very variously exerted. Almost any organ or function of the body has seemed liable to be affected, that special tissue or organ suffering the most according to the varying susceptibility of the individual or the weakness or peculiarity of the part.”<sup>24</sup> In 1892 Althaus stated, “We are as yet in complete ignorance about the chemical constitution of the special toxine which is secreted by the bacillus of grip.”<sup>25</sup> He also wrote, “that the poison of grip attacks with preference the very sources of

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<sup>21</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 100-101.

<sup>22</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 50.

<sup>23</sup>“The Russian Influenza: Features of the Epidemic,” *The British Medical Journal*, January 4, 1890, 31.

<sup>24</sup>Eade, 308.

<sup>25</sup>Althaus, 9.

life.”<sup>26</sup> Most, if not all, of these writers accepted that influenza was a germ, specifically a bacterium. But the mechanism of a poison, a word these writers purposefully chose, operates in a different manner than a living organism. A poison as envisaged by these authors meant that either the disease itself was a poison or that the disease produced a poison that would overrun the body’s purifying systems. This concept of a poison is quite different from our current understanding of how the disease normally operates, which shows that there was still much to learn about the flu.

Though much was learned, or was thought to have been learned, about influenza during the 1890s, much of this was lost on those who practiced medicine in the late 1910s. For one, some were in disbelief that this disease, with its new characteristics, was influenza at all. They had questioned this in the previous pandemic as well. In late December 1889, a British doctor in Constantinople expressed the opinion that the disease was not influenza, but was some other complaint, like dengue or dandy fever.<sup>27</sup> In mid-January, 1890, Dr. H. Handford, of Nottingham, wrote to *The British Medical Journal* that “it is the opinion of many of the doctors that they are meeting with numerous instances of a disease with which they were previously unfamiliar.”<sup>28</sup> Dr. Edgar G. Barnes of Suffolk pondered, “Is it really

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<sup>26</sup>Ibid., 77.

<sup>27</sup>*The Times*, December 27, 1889, 9.

<sup>28</sup>“The Epidemic of Influenza”, *The British Medical Journal*, January 18, 1890, 147.

influenza such as was known in 1847 and in previous outbreaks... or is it some other form of disease hitherto unknown to us?”<sup>29</sup> In 1918 one author, writing about 1889, said that “The pronounced back-ache and absence of catarrh<sup>30</sup> at first suggested that the malady might be dengue fever, but it was soon recognised that the epidemic was one of genuine influenza.”<sup>31</sup> How “soon” this actually happened is questionable, because Althaus wrote, in April 1892, that “there is still considerable difference of opinion on this subject.”<sup>32</sup> Parsons had already used some of the pages of the 1891 LGB report to show that the epidemic was not dengue. He argued that dengue was similar to influenza because it spread from person to person, but it infected far less people. Dengue, he said, was often contracted by “75 to 80 per cent.” of the population, but that “During the late Influenza epidemic the inhabitants of St. Petersburg suffered at the rate of about 66, of Berlin of about 33, and of London possibly about 20 per cent.”<sup>33</sup> But the issue was still undecided in 1892, so Althaus spent a few pages to show how dengue was different – dengue was more painful (“It is also particularly bad in the hairy scalp, where the pain seems to reside in the very roots of the hair, so that the least touch there is intolerable”) and took longer to recover

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<sup>29</sup>Ibid., 149.

<sup>30</sup>Catarrh is another word for a cold.

<sup>31</sup>“Epidemic Influenza,” *Nature*, October 24, 1918 (No. 2556, Vol. 102), 146.

<sup>32</sup>Althaus, 315.

<sup>33</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 57.

from, but it did not come back, while influenza could.<sup>34</sup> *The British Medical Journal* had tried to lay these doubts to rest on January 4, 1890, when it included this statement:

Although the existence of an epidemic of dengue fever in Asia Minor during the past autumn, and certain peculiarities in the symptoms observed in some of the sufferers from the present European epidemic have caused some doubts to be expressed, further information tends to confirm the opinion we ventured a few weeks ago that the disease is really epidemic influenza.<sup>35</sup>

Others were still not convinced. A surgeon named E.J. Erskine Risk submitted his theory to the February 15<sup>th</sup> issue of *The British Medical Journal*, saying, “My hypothesis is, therefore, that the present epidemic is only dengue modified by climate, and exhibiting, instead of the rash of hot climates, the metastatic hyperaemia of the bronchi and bronchioles, and also of the intestinal canal.”<sup>36</sup>

This was an active debate in the 1890s, but it should have been settled even before then. In his 1890 work, E. Symes Thompson clearly stated, “The variations of the same disease on different occasions of its epidemic prevalence are so considerable as to have elicited from the observant and judicious Sydenham the remark, that on each fresh visit of such disease he had to work out for himself a fresh knowledge of

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<sup>34</sup>Althaus, 318-320.

<sup>35</sup>“The Russian Influenza: Features of the Epidemic,” 31.

<sup>36</sup>E.J. Erskine Risk, “Analogy Between Dengue and Influenza,” *The British Medical Journal*, February 15, 1890, 357.

the appropriate plan of treatment.”<sup>37</sup> Sydenham was a 17<sup>th</sup> century doctor, and still one of the most respected figures in English medicine, but even if people had thought this was too out of date, they had to look no further than Theophilus Thompson’s or E. Symes Thompson’s books. Both contained thorough accounts of a disease that had considerable variations in its symptoms, recorded firsthand by medical practitioners. It should have been no surprise when contemporaries began recording a disease with vastly different symptoms. But it was. For one, “the comparative absence of catarrh of the conjunctival and nasal mucous membranes, the occasional appearance of a measly or scarlatiniform eruption, and other circumstances, gave rise for a time to a doubt as to whether the epidemic was really one of influenza.”<sup>38</sup> Before the epidemic reached England, Frank G. Clemow wrote to *The British Medical Journal*, saying, the disease “is frequently spoken of in the lay papers as influenza, but the typical symptoms of this disease are far more frequently absent than present.”<sup>39</sup>

The problem was partly due to the vagueness of the term “influenza,” which was discussed in the late 19<sup>th</sup> century, but not solved by the second decade of the 20<sup>th</sup> century. E. Symes Thompson wrote, “The nomenclature of the disease now definitely known as influenza is not of the clearest.”<sup>40</sup> Sisley went even further, saying, “There is

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<sup>37</sup>E. Symes Thompson, vii.

<sup>38</sup>*Ibid.*, 397.

<sup>39</sup>Frank G. Clemow, “The Epidemic Influenza in Eastern Europe,” *The British Medical Journal*, December 7, 1889, 1305.

<sup>40</sup>E. Symes Thompson, 396.

nothing on which more difference of opinion exists amongst physicians than on the nomenclature of disease.”<sup>41</sup> In the interim between the last major outbreak in Britain in 1848 and the one that hit in 1889, “influenza” as a diagnosis had been used to describe a few ailments, which were not necessarily reflected in its true pandemic form. Parsons wrote that the name “‘influenza’ in ordinary times [was] a term of popular, or loose medical, rather than of strict scientific use.”<sup>42</sup> E. Symes Thompson described this when he said,

the word influenza would have answered its purpose well enough had it not come to have a totally different meaning in damp cold climates where coryzal symptoms<sup>43</sup> are common. Owing to the accidental association of these coryzal symptoms in previous epidemics, the term has been currently employed to designate an acute catarrhal condition of the mucous membranes of the eyes and nose, assumed to be contagious, and possibly infectious. Hence, when the epidemic first broke out, its victims often declined to believe that their malady could rightly be called influenza, seeing that the most salient features of the English affection of that name were conspicuous by their absence. For some years to come, at any rate, we shall have learned to disassociate the name from any necessary connection with a cold in the head.<sup>44</sup>

*The British Medical Journal* similarly wrote, “So notoriously, indeed, did these catarrhal affections characterise the earlier occurrence of influenza, that ordinary severe catarrh is commonly spoken of, even up to the present day, as ‘influenza;’ while the prevailing epidemic is differentiated by the adjective ‘Russian’ from these attacks

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<sup>41</sup>Sisley, *Epidemic Influenza*, 1.

<sup>42</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 7.

<sup>43</sup>Coryza is another word for a cold.

<sup>44</sup>E. Symes Thompson, 396.

of ordinary catarrh.”<sup>45</sup> This made it more difficult to spot the earliest incidents, because

at the commencement of the Influenza epidemic observers were unfamiliar with the disease, understanding by the word ‘influenza’ a different assemblage of symptoms. By the time that it had reached its later stages, medical men, even if they had not seen the disease, had become familiar with its symptoms by description, and hence, knowing what to expect, on its arrival recognized the early cases more readily.<sup>46</sup>

Parsons, speaking to the annual meeting of the British Medical Association in 1891, said

a habit has unfortunately obtained of dignifying by the name of ‘influenza’ or ‘influenza cold’ cases of ordinary catarrh attended with some febrile disturbance and depression. It seems not unlikely that the name ‘influenza’ became fashionable in former epidemics in which catarrhal symptoms seem to have been a more conspicuous feature than in the recent ones, and that the gradual diminution in the number of deaths recorded from ‘influenza’ may have been due to the decline of this fashion of speech, or to the dying out of the generation of medical practitioners who were accustomed to it.<sup>47</sup>

Parsons believed that the term influenza “should accordingly be restricted to the epidemic disease.”<sup>48</sup> Despite this, he still felt the need to frequently use the term “epidemic Influenza” throughout his writing. In early December 1889, when the world

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<sup>45</sup>“The Influenza Epidemic of 1836-37 and 1889-91,” *The British Medical Journal*, May 23, 1891, 1145.

<sup>46</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 99.

<sup>47</sup>H. Franklin Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” *The British Medical Journal*, August 8, 1891, 304.

<sup>48</sup>*Ibid.*

was still focusing on Russia, *The British Medical Journal* stated, “It is so long since there has been a well-marked general epidemic of the disease in this country that it may be well to recall some of the characters of this, in many respects the most typical of epidemic diseases.”<sup>49</sup> Althaus concurred by writing,

Indeed, the disease not having appeared in England in an epidemic, or, rather, pandemic form for many years past, was unfamiliar to the present generation of practitioners; more especially as in numerous cases the signs of catarrh of the respiratory organs, commonly called ‘influenza cold,’ and which were generally believed to be characteristic of the complaint, were either slight or completely absent.<sup>50</sup>

But the problems associated with the term influenza may have been endemic, stemming from its creation by Italians in the 16<sup>th</sup> century who believed the illness was due to a negative celestial influence. Since this was mostly not accepted by the late 1800s, “the word, in common with so many others of a like nature, reflects faithfully the erroneous tenets of departed schools of thought.”<sup>51</sup>

There were other difficulties with the name. For one, some practitioners chose not to call it “influenza,” which created problems. Writing in 1892, Julius Althaus decided to name his book “Influenza,” but in the actual text he preferred another word. He had his reasons, though they seem more based on personal preference than practical application:

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<sup>49</sup>“Epidemic Influenza,” *The British Medical Journal*, December 7, 1889, 1290.

<sup>50</sup>Althaus, 2.

<sup>51</sup>E. Symes Thompson, 396.

The word “influenza” being somewhat long, and, as it seems to me, not very happily chosen, I propose to use the term “grip,” by which the disease is known in Germany and France, but spelt as an English word, as synonymous with influenza. I hope that this innovation may be generally accepted, not only because the term is short, but also because it graphically denotes the suddenness with which the disease attacks the patient... Another reason for accepting the term “grip” as equivalent to influenza is, that it is really impossible to speak of the “influence of influenza,” as one often feels tempted to do when talking or writing about it.<sup>52</sup>

There seems to be little validity in changing an accepted term simply to make speech flow easier, and appear less redundant. Dr. William Wylie believed that a different name should be adopted in 1892 because the disease seemed so different from what had been experienced in the past: “Such was influenza nearly sixty years go, and this attack resembles very closely in its symptoms and character those of 1889-90, but not so severe as the epidemic of the spring of 1891. The malady, as it now exists, should be known by some other name, to distinguish it from the disease heretofore styled ‘influenza,’ and from which it differs in many respects.”<sup>53</sup> But having so many different terms in the lexicon was confusing, and at times these might distort the actual nature of the disease in question. E. Symes Thompson wrote, “Some further confusion has been caused in this country by the careless use of such expressions as ‘epidemic catarrh,’ etc. This is distinctly ill-chosen, since catarrh is not necessarily

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<sup>52</sup>Althaus, 1.

<sup>53</sup>William Wylie, “The Influenza Epidemic of 1833,” *The British Medical Journal*, January 30, 1892, 250.

present.”<sup>54</sup> In a speech given to the Society of Medical Officers of Health in March, 1890, Dr. Frank Clemow weighed in the debate: “[he] considered the name influenza – that is, some unknown influence – given to it by the Italians of the sixteenth century, as at least unobjectionable, and better than ‘catarrhus contagiosus,’ or others which assumed its nature or implied as essentials what were only accidents of the disease.”<sup>55</sup> Sisley said the problem stemmed from some wanting to name the disease based on its clinical features, while another group wanted a name that reflected its pathological features. Neither, in Sisley’s book, were “entirely satisfactory.”<sup>56</sup> Instead of choosing a new word, he settled on the accepted term of influenza, for “When a new name is given to an old disease, as Dr. Wilks points out, ‘the only advantage is to the man who names it’.”<sup>57</sup> For people like Parsons, this debate over similarities was moot, since “the disease with which we have been visited is the same as that which has prevailed so extensively in former periods.”<sup>58</sup> In all respects, including its spread and its symptoms, it was “the same as in former epidemics of Influenza.”<sup>59</sup> But despite having experienced three epidemics in three years, the term was still unclear in some circles.

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<sup>54</sup>E. Symes Thompson, 396-7.

<sup>55</sup>*The British Medical Journal*, March 29, 1890, 723.

<sup>56</sup>Sisley, *Epidemic Influenza*, 1.

<sup>57</sup>*Ibid.*, 5.

<sup>58</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 54.

<sup>59</sup>*Ibid.*

In 1893, R. Thorne Thorne, Medical Officer of the Local Government Board, wrote, “the term Influenza as a cause of death has varied not only in different localities during the same epidemic, but also in the same locality in different epidemics.”<sup>60</sup> And the case over nomenclature went unsolved. The term “influenza” was something that people were still grappling with in 1918, when the LGB’s circular stated, “The real difficulty is that of defining Influenza.”<sup>61</sup> Herbert French wrote, “It is difficult to make a word picture which adequately describes what was the average admixture of the... diverse ingredients. ... One feels tempted to coin a new word altogether.”<sup>62</sup> One problem that remained is that there was still no test to determine if a person was truly suffering from the flu. As the 1920 MOH report stated, “Amongst the public, ‘influenza’ has almost as vague a connotation as a ‘touch of liver’ and, for the reasons explained above, the doctor had not (and still has not) any instrument of precision which enabled him in this matter to rise superior to the temptation of a conveniently loose phraseology.”<sup>63</sup>

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<sup>60</sup>R. Thorne Thorne, “Introduction by the Medical Officer,” in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), vii-viii.

<sup>61</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 2.

<sup>62</sup>Herbert French, “The Clinical Features of the Influenza Epidemic of 1918-19,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 99.

<sup>63</sup>Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 16.

To be fair, the symptoms did present a problem; they were multifaceted, often markedly varying from one patient to another. Sisley captured this perfectly when he wrote, “To sum up accurately all the symptoms of influenza in a single sentence is impossible.”<sup>64</sup> E. Symes Thompson recorded this description of the symptoms in the attack of 1889 and 1890:

The victim thinks he has “caught a cold,” to use the consecrated expression; he experiences the same aching lassitude as that which characterises the “bad cold,” and there is an intense feeling of depression, both mental and physical. The face feels flushed and uncomfortable, and little shudders creep up the spine, the integument wrinkling up into the condition known as “goose skin.” Before very long, perhaps even coincidentally with the shivering, violent headache, with giddiness, supervenes, more or less limited to the frontal region and behind the eyeballs, often of a neuralgic character... The prostration is immediate and extreme, and in the majority of cases it is the most salient clinical feature... The sensation of cold is persistent and distressful. The temperature is very variable... The pain in the limbs is general, and seems more of the nature of an ache... The muscles feel sore on pressure... the backache is often one of the earliest indications of an attack... The tongue is furred and tremulous, and there is, for a time, complete anorexia... The bowels are usually confined, and the urine high coloured, scanty.<sup>65</sup>

Although this abridged list is rather long, there were still other symptoms. D.S. Park of the Houghton-Le-Spring Union Workhouse said, patients had a “headache, and a feeling of giddiness with sore throat, and pains in the back and legs. The tongue was coated and of a yellowish-brown color.”<sup>66</sup> Althaus began his description according to

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<sup>64</sup>Sisley, *Epidemic Influenza*, 6.

<sup>65</sup>E. Symes Thompson, 399.

<sup>66</sup>D.S. Park, “Reports on Influenza in the Houghton-Le-Spring Union Workhouse, Durham,” in H. Franklin Parsons, *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 72.

how he believed the disease progressed, starting with the headache, which was “often at once so intolerably severe that the patient instinctively seeks his bed.”<sup>67</sup> But the symptoms did not end with this initial pain:

There is also habitually stiffness and soreness of the whole body, and pain in the hips and thighs, all of them being aggravated by movement. The pain in the limbs is often most severe, as if all the bones were broken... Tremor, twitches, jerkings, cramps, and torticollis may also be present. The patient either lies in a death-like stillness, in order to avoid any increase of pain by movement, or he is so restless and uncomfortable that he keeps constantly tossing about or changing his position.<sup>68</sup>

The pain could be so intense that it was accompanied by “delirium” – “The patient is then literally driven mad with pain.”<sup>69</sup> Some of the children at one school in Lincolnshire “became rather deaf for a time (an experience [their doctor could] personally confirm). Apathy and dullness of apprehension lasted some time after all other traces of illness had disappeared.”<sup>70</sup> *The Spectator* offered a similar statement in 1891 when it reported, “Moreover, one of its most painful features, its effect on the mind, or, if you will, on the spirits, during the attack and through the early period of convalescence, is becoming increasingly marked.”<sup>71</sup> Parsons said “in persons of

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<sup>67</sup>Althaus, 35-36.

<sup>68</sup>Ibid., 37.

<sup>69</sup>Ibid., 38.

<sup>70</sup>R. Bruce Low, “Notes on Influenza in Lincolnshire and East Yorkshire,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 253.

<sup>71</sup>“The Influenza,” *The Spectator*, May 23, 1891, 718.

neurotic tendency the malnutrition may result in various affections of that system, such as neuralgia, neuritis, paralysis, epilepsy, and insanity.”<sup>72</sup> These accounts substantiate each other concerning the average case, but there were wide variations. Thompson made sure that his readers understood that “While these symptoms represent the average type of the disease, there has been an extreme and remarkable diversity in the manner of the onset, as well as in the subsequent course, of the malady.”<sup>73</sup> A sense of influenza’s complexity could inspire humility amongst those who chose to write about it. Sisley claimed that Dr. Theophilus Thompson was best equipped to define the disease, “yet Dr. Thompson wisely refrained, and began his book by speaking of ‘the malady which forms the subject of this volume’.”<sup>74</sup>

The symptoms could vary so much, in fact, that some writers and practitioners preferred to distinguish between different types of influenza. Althaus wrote that “the great varieties observed in the symptoms of the feverish attack of grip, in the recent, as well as in the older epidemics of it, have induced a number of observers to assume three different forms of the disease, viz.: - 1<sup>st</sup>. The nervous or encephalic form; 2<sup>nd</sup>. The catarrhal, respiratory, or thoracic form; and 3<sup>rd</sup>. The gastro-intestinal or abdominal form of grip.”<sup>75</sup> But Althaus was not persuaded by these distinctions, stating,

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<sup>72</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 60.

<sup>73</sup>E. Symes Thompson, 399-400.

<sup>74</sup>Sisley, *Epidemic Influenza*, 6.

<sup>75</sup>Althaus, 22.

I wish, however, to lay particular stress on what I am convinced to be the fact, viz., that these three forms of the disease are not distinguished from one another by any true pathological characters, but that influenza is always a true nervous fever, the symptoms of which differ only as far as the localisation of grippo-toxine in different areas of the nervous system is concerned. Indeed it would be quite as easy to propose eight or ten different forms of the disease as the three which I have just mentioned, and which are perfectly arbitrary, however much sanctioned by authority.<sup>76</sup>

Thompson, on the other hand, acknowledged these three divisions but preferred the five divisions made by Dr. Normal Kerr – the “general,” “catarrhal,” “gastro-intestinal,” “nervous,” and “arthritic” types – which Thompson regarded as more accurate.<sup>77</sup> Parsons accepted the three forms of the disease, and theorized that the differences might be due to “the route by which the materies morbi gains access to the human body.”<sup>78</sup> It was not until the third epidemic of the 1890s that the typical lung complications were properly focused on. In 1893, R. Thorne Thorne wrote,

whereas in the former epidemic disturbances of the circulatory and cerebro-spinal systems were prominent manifestations; the stress of the malady in the more recent prevalences fell especially upon the lungs. This had led Dr. Parsons to raise in his present report the question as to whether inflammatory affections of the lung, and especially pneumonia, are an integral part of the disease or merely super-added complications.<sup>79</sup>

But even with this realization, they were still confounded with the results when compared to their speculations as to how the disease might work. Parsons wrote, “It

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<sup>76</sup>Ibid., 22-23.

<sup>77</sup>E. Symes Thompson, 407.

<sup>78</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 64.

<sup>79</sup>R. Thorne Thorne, ix.

might have been anticipated that the death-rate from Influenza would exhibit in the different counties some degree of parallelism with the death-rate from diseases of the respiratory organs, more especially in view of the fact that a large increase in the mortality from diseases of this class is always observed during an epidemic of Influenza, but such is not the case.”<sup>80</sup> All they knew, or thought they knew, did not solve much.

Despite observations like this, and the record provided by the experience of the 1890s, symptoms were also troubling to those trying to decipher the later pandemic. In October 1918 the LGB stated,

it is impossible to set up an unerring bacteriological test for Influenza ; and its clinical symptoms are so multiform as not to permit of a differential clinical diagnosis in all cases. The one distinctive feature of the disease is its occasional occurrence in epidemics and in worldwide pandemics. It is impracticable, however, to base a diagnosis on this characteristic; for it would exclude cases occurring in the intervals of an epidemic, and ordinary non-influenzal catarrhs would be included.<sup>81</sup>

As if the disease did not present its own difficulties in diagnosis, there were also those who discounted that the disease truly was influenza. Dr. L. Rajkmann used knowledge about the previous pandemic to question the current one: “The epidemiology of the present pandemic presents some abnormal features, if it be judged by the standard of the 1890/3 outbreak, a somewhat questionable method though often resorted to.

Since the last pandemic, however, new types of epidemic disease have become

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<sup>80</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 4.

<sup>81</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 3.

recognised more clearly and identified as separate units.”<sup>82</sup> In his opinion, more investigation needed to be done to determine whether the disease was purely influenza, or if each wave of the pandemic was actually an outcrop of another disease, or perhaps even another disease mixed with the flu. Concerning the second wave, he wrote, “As for the advanced cases with an increasingly fatal pneumonic involvement, it should yet be decided whether the isolated outbreaks of virulent pneumonias reported from the whole of Europe during the last three years, and making again their appearance this autumn, bear any, and if so, what direct relation to the pandemic.”<sup>83</sup> Like what occurred in 1889, this uncertainty could also have been due to the absence of influenza for decades, since the last major outbreak was more than thirty years prior to this one. When the disease appeared in British army hospitals in France in May and June 1918, “many physicians preferred to use the non-committal description ‘Pyrexia of Uncertain Origin’ (P.U.O.).”<sup>84</sup> In 1918 there were several different theories as to the true name of this seemingly unknown disease. The *Daily News* quoted a “doctor in a pleasant residential quarter of South London” who, when asked if the disease was really influenza, said, “Well, honestly, I don’t know. The symptoms vary so much that one

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<sup>82</sup>The National Archives, “‘The pathology of Influenza’ by Dr. Rajkmann,” (London, England: FD5/186, 1918), 1.

<sup>83</sup>Ibid.

<sup>84</sup>Colonel S.L. Cummins, “Introduction,” in Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 8.

has nothing definite and consistent to go upon.”<sup>85</sup> In July 1918, a report in *The Lancet* by Captain T.R. Little of the Canadian Mobile Laboratory questioned whether the disease was truly influenza, listing the symptoms of the present disease and how they differed from what might be called textbook, or typical, influenza.<sup>86</sup> One doctor preferred to call the disease “epidemic septic bronchitis” until its true form could be determined.<sup>87</sup> And the public might diagnose it themselves: “Some soldiers who are suffering from the prevalent complaint are asking why this is called influenza at all. They declare that it is exactly the same as trench fever. Others say that it is really a form of malaria.”<sup>88</sup> The journal *Nature* stated, “The present epidemic of influenza, and the rise in the rate of mortality consequent upon it, are receiving much attention in the public Press, and many irresponsible statements are being made concerning the disease. Among these is the hint that the ‘so-called influenza’ is plague in a thin disguise.”<sup>89</sup> Some doctors likened it to what they had witnessed in the near past. In January 1919, a group wrote about the outbreaks of purulent bronchitis they had treated in army camps in France from 1915 to 1917. It too shared the heliotrope

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<sup>85</sup>“Influenzal Theories,” *Daily News*, October 29, 1918, 5.

<sup>86</sup>Captain T.R. Little, “Absence of the Bacillus Influenzae in the Exudate from the Upper Air-Passages in the Present Epidemic,” *The Lancet*, July 13, 1918, 34.

<sup>87</sup>J. Landman, M.D., “Influenza, or a New Disease,” *The Lancet*, November 9, 1918, 645.

<sup>88</sup>“Influenzal Theories,” 5.

<sup>89</sup>“Epidemic Catarrhs and Influenza,” *Nature*, October 31, 1918 (no. 2557, vol. 102), 167.

cyanosis that was proving so fatal in the present pandemic, and they came to the conclusion that the two diseases were “fundamentally the same condition.”<sup>90</sup> In the 1920 MOH report, Herbert French agreed: “Those who had experienced the minor epidemics of ‘purulent bronchitis with heliotrope cyanosis and fatal ending’ that had occurred here and there in military camps in America, England and France during 1916 and 1917 had already become familiar with some of the worst features, especially the dreaded blueness, of what was probably the same malady under a different name.”<sup>91</sup> Some still think this today.<sup>92</sup> Still others believed that the time of the year suggested another disease, called “sandfly fever.”<sup>93</sup> This questioning happened in 1890, too. Dr. John Haddon, writing in *The British Medical Journal*, said he had dealt with a disease in 1877 that had the symptoms of the epidemic they were dealing with in 1890.<sup>94</sup> And even before the epidemic began in Britain, in 1889 one doctor asserted, “I think it is only a severe form of the ordinary type.”<sup>95</sup> Though these thinkers were in the

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<sup>90</sup>Adolphe Abrahams, Et. Al., “A Further Investigation into Influenzo-Pneumococcal and Influenzo-Streptococcal Septicaemia,” *The Lancet*, January 4, 1919, 1.

<sup>91</sup>French, “The Clinical Features of the Influenza Epidemic of 1918-19,” 69.

<sup>92</sup>See the works of J.S. Oxford.

<sup>93</sup>“Sandfly Fever or Influenza,” *The Lancet*, September 14, 1918, 364.

<sup>94</sup>John Haddon, “Influenza and Pneumonia,” *The British Medical Journal*, February 15, 1890, 355.

<sup>95</sup>W. Gordon Hogg, “The Epidemic of Influenza”, *The British Medical Journal*, December 21, 1889, 1418.

minority, this shows that one of the main obstacles in achieving consensus about prevention or treatment started at the beginning; they first needed to know what disease they were fighting.

Others were ready to assert the conviction that it was influenza, regardless of the unusual course it often took when symptoms strayed from the norm. “We shall do well to reject all the fanciful theories which are prevalent, largely owing to the erroneous belief that the pandemic is something new,” a *Times* article said in late October 1918.<sup>96</sup> But these defenders were forced to give proof to justify why they believed it was bona fide influenza. One aspect that sidetracked observers was that the disease began out of season in 1918. So, in *The Lancet* Major Greenwood reminded readers that summer epidemics had occurred in England’s past.<sup>97</sup> Another hurdle came in explaining the variety of symptoms in this particular outbreak. The Royal College of Physicians pointed out that the same diseases could have varying symptoms: “This outbreak is essentially identical, both in itself and in its complications, including pneumonia, with that of 1890s. The disproportionate occurrence of a special symptom, a well-recognized phenomenon in the case of epidemics, as, for example, nose-bleeding in the present epidemic, does not invalidate this statement.”<sup>98</sup> And in the end, it was agreed that the disease that hit Britain and the world in 1918 *was*

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<sup>96</sup>“The Mystery of Influenza,” *The Times*, October 28, 1918, 7.

<sup>97</sup>Major Greenwood, *The Lancet*, November 9, 1918, 644.

<sup>98</sup>The National Archives, “Royal College of Physicians Memorandum on Influenza,” (London, England: MH 10/83, November 1918), 1.

influenza.

Problems persisted even when everyone agreed on the disease. The unusually high mortality and youthful age incidence of the pandemic in 1918 and 1919 was another factor that caused confusion and debate. There were many who discounted the harmfulness of influenza, choosing to blame the deaths on other causes (which, at times, proved more accurate than not). They did this in the 1890s, too. In December 1891, one writer for *The Times* said, “The excessive mortality is due, not so much to the influenza itself, as to its effects, which generally take the form of pulmonary affections.”<sup>99</sup> In 1892, one doctor speculated that lack of rest during convalescence was to blame: “the impatience of modern times with regard to illness has been as large a factor with regard to death-rate in the present visitation as the complaint itself.”<sup>100</sup> In 1918 the villain was not the flu. An article in the journal *Nature* claimed that “even in the years when the ravages of influenza are greatest bronchitis and pneumonia are each responsible for twice as many deaths as influenza. Thus the general problem is that of the prevention of catarrhs.”<sup>101</sup> Pneumonia, which was said to be the primary killer, became the focus. *The Times* stated that “what makes the present visitation serious is that in all countries people are dying of the septic pneumonia which often

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<sup>99</sup>“Influenza in Edinburgh,” *The Times*, December 2, 1891, 7.

<sup>100</sup>F. Orton, *The Times*, January 26, 1892, 6.

<sup>101</sup>“Epidemic Catarrhs and Influenza,” 168.

supervenes if the utmost precaution is not quickly taken.”<sup>102</sup> In the House of Commons, Mr. Hayes Fisher, President of the LGB, said, “bacteriologically, this outbreak does not differ from other outbreaks of influenza, the fatality being due to secondary infections, chiefly by pneumococci and streptococci.”<sup>103</sup> Influenza was not the primary threat. Nearing the end of the third wave, a correspondent in *The Times* wrote, “Many announcements of ‘cures’ of the disease have been made. The public should realize that probably upwards of 80 per cent of all cases of uncomplicated influenza in this epidemic have got well by themselves – when pneumonia has supervened it has, of course, been a different story.”<sup>104</sup> Researchers are still uncertain as to why the influenza germ of 1918 was so deadly. But for those in 1918 and 1919, focusing on pneumonia served a real purpose. Influenza was still an enigma; with pneumonia there was the possibility of control.

For the majority, who believed it truly was influenza, Pfeiffer’s Bacillus soon became a target of investigation. In 1918, and even 1919, most in Britain still held this as the cause of the disease, even though dissent was being voiced. One of the reasons was that doctors did not have time in 1918 to make a thorough investigation of the disease they were facing. This was something that had always proved frustrating because the disease appeared at unknown intervals and often only for brief periods,

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<sup>102</sup>“The Mystery of Influenza,” 7.

<sup>103</sup>“Individual Duty,” *The Times*, October 29, 1918, 10.

<sup>104</sup>*The Times*, March 14, 1919, 7.

making it difficult to study. In 1891 Thompson recounted this frustration, saying

The erratic and always unexpected outbreak of the disease, and the promptness with which it appears and disappears, may account for the fact that we are still strangely ignorant of the causes which preside over its origin and dissemination. We are not even in a position to affirm authoritatively whether or not it is transmissible, or whether, if transmissible, the virus is conveyed through the air, the water, or other vehicle.<sup>105</sup>

When the disease spread, it brought a host of opportunities. In 1891 Frank Nicholson wrote, “The two recent epidemics have given everyone in practice the opportunity of seeing a large number of cases of influenza – a disease which was quite unknown to any but the older members of the profession.”<sup>106</sup> Parsons also remarked on this positive aspect of the disease: “it has recently prevailed so extensively and has occupied so large a portion of our professional attention that we may well at the present time give it the very fullest consideration.”<sup>107</sup> They had to act quick, because “the disease itself will probably soon have disappeared and so the opportunity of investigating it will have gone for an indefinite period.”<sup>108</sup> When the next pandemic hit, the same held true. A private letter (probably written by Sir Walter Fletcher) to Sir Arthur Newsholme, President of the LGB, said,

As to the collection of evidence of the bacteriology of cases, our

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<sup>105</sup>E. Symes Thompson, 414.

<sup>106</sup>Frank Nicholson, “The Complications and Sequelae of Influenza,” *The British Medical Journal*, June 13, 1891, 1273.

<sup>107</sup>Eade, 308.

<sup>108</sup>Ibid.

experience has been very disappointing, though perhaps we could hardly have expected anything else. The work done has been chiefly done by scattered men overburdened with other work, and for the most part is thoroughly unsatisfactory. It looks as though the mere collection of evidence already obtained will turn out to be quite useless. Quantity will never make up for want of intensive quality, and that has never been better shown than in this instance.<sup>109</sup>

To address issues like this – to make sure this precious chance was not squandered, in 1918 Dr. L. Rajkmann drew up a proposal on how to conduct research concerning the flu in his “Memorandum on a scheme of Enquiry concerning influenza.” He expressed his frustration that the flu was simply not regarded as important:

The most difficult practical problem consists in the selection of a suitable hospital. The whole of the clinical material must be at the entire disposal of the team of workers. No great London hospital would submit to such an arrangement unless a cataclysmal revolution were to take place, even if the M.R.C.<sup>110</sup> decided to take over temporarily, and pay the expenses of, two or three wards.<sup>111</sup>

And he felt that research proceeded along the wrong lines, with too much argument and fame seeking done by doctors and bacteriologists. He wrote, “The centre of investigation should collect cultures isolated at various laboratories throughout the country and abroad in order to classify them and ascertain the actual identity of or otherwise on the basis of real experimental work, thus breaking with the usual practice of assuming identity or disproving such similarity by the exchange of more or less

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<sup>109</sup>The National Archives, “Influenza Committee Correspondence with LGB and War Office,” (London, England: FD 1/535, October 23, 1918).

<sup>110</sup>Medical Research Council (M.R.C.).

<sup>111</sup> “‘The pathology of Influenza’ by Dr. Rajkmann,” 2.

abusive letters in the medical press.”<sup>112</sup>

The doctors who fell under the spell of Pfeiffer’s theory of the Influenza Bacillus were not incompetent. This was not the first time that a theory had sidetracked professionals. Whole generations of medical practitioners, could, and were, incorrectly influenced by convincing theories. As one doctor remarked in 1891 about his colleagues, “[Sir Thomas] Watson’s views have, I think, done much to encourage the opinion that influenza is not infectious, for most physicians who had not seen the disorder till 1889 were affected by the writings of the most graceful and convincing medical writer of the century, who, in this instance, I believe was mistaken in his conclusions.”<sup>113</sup> In 1918 people were raising doubts about Pfeiffer’s bacillus, but there was not a replacement. The LGB’s circular of October 22, 1918 stated, “When naso-pharyngeal catarrh occurs during an epidemic of Influenza, and sometimes apart from this, the *Bacillus influenzae* of Pfeiffer may be present.”<sup>114</sup> The language used here – “may be present” – is more cautionary than what was found in 1892 and beyond, but they were still unwilling to sever the connection completely. The circular further asserted, “The fact that this bacillus, if it be not the causal micro-organism of Influenza, produces much of the mischief in this disease, is confirmed by its presence in

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<sup>112</sup>Ibid. (Original emphasis).

<sup>113</sup>*The Times*, May 22, 1891, 14.

<sup>114</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 2.

large numbers in immediate relation to minute lesions occurring in the lung.”<sup>115</sup>

Researchers had proof of its presence. W. James Wilson and P. Steer examined cases amongst British soldiers in France in the first and second waves of the influenza pandemic in 1918. In their report they stated, “Our opinion with regard to the occurrence of Pfeiffer’s bacillus in the June-July outbreak was that in the mucopurulent secretion from the bronchi it could be cultivated in the majority of the cases and we had the impression that if we had made a second examination we should have recovered it from all such cases.”<sup>116</sup> And for those instances in which Pfeiffer’s bacillus was not present, they had an explanation:

with regard to our Negative findings we would remark that only single observations were made and that occasionally the plates were overgrown with other bacteria so that its presence may have been masked. As to the direct examination of sputum and other pathological material for *B. influenzae*, in our opinion no importance whatever is to be attached to a negative finding as we have found many colonies develop on our culture where films made from the material stained by Gram and counterstained with dilute Carbol fuchsin had failed to reveal Pfeiffer’s bacillus.<sup>117</sup>

More avenues of research were opened up as more experiments were performed. For instance, in 1919 Dr. Fleming was attempting to determine if there were several

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<sup>115</sup>Ibid., 3.

<sup>116</sup>The National Archives, “Bacteriological and Pathological Observations of Influenza in France during 1918 by Major W.J. Wilson and Sergeant P. Steer,” (London, England: FD5/187, 1918), 2.

<sup>117</sup>Ibid., 1.

different strains of Pfeiffer's Bacillus, as he theorized.<sup>118</sup> So, researchers and commentators in 1918 and 1919 did not approach this blindly, or unscientifically, they were simply looking in the wrong place. Or, perhaps it might be more accurate to say that they were not looking close enough.

Not everyone shared the same opinion. Throughout the pandemic evidence continued to mount against the "Influenza Bacillus," which caused some doctors to question whether Pfeiffer was correct. The changed nature of the disease in 1918 gave rise to a host of questions on this matter. For one, if the Bacillus was the same, then why were so many people dying? For doctors grasping for answers, the possibilities could be endless. Many, as noted above, turned to pneumonia for the answer. Others began to investigate the role that the Bacillus played. One theory was that the Bacillus paved the way for other, more dangerous secondary invaders. For Wilson and Steer, the Great War gave them insight into how Pfeiffer's bacillus worked in this way. They reported,

During the latter months of 1917 and the whole of 1918 we had an opportunity of studying the lung condition as met with in 42 fatal cases of Gas Shell poisoning. In these cases Mustard Gas was responsible for most of the lesions though it may have been mixed with Phosgene in many instances. We were impressed with the resemblances presented by the lungs in cases of Influenza with those observed in the Gas Shell wounds. The superficial burns of the skin and the necrosis of the lining of the trachea and bronchi were of course absent in the Influenza cases but the

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<sup>118</sup>The National Archives, "Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919," (London, England: FD1/536, 1919).

haemorrhages and mingled areas of emphysema and consolidation in the lungs were common to both conditions. ... We consider that in Influenza, Pfeiffer's bacillus acts as a pioneer and prepares the way for Pneumococci, Staphylococci and Streptococci which are able to grow and multiply in the damaged mucous membrane of the bronchi and subsequently invade the lungs and even the blood. Poison gas would seem to do the same nefarious work.<sup>119</sup>

This is quite similar to the LGB's statement found above that Pfeiffer's bacillus "produces much of the mischief" of influenza. Another pair of researchers wrote, "It is a well-known fact that mixed infections are more severe than pure infections, and to this we may attribute the severity and mortality of this epidemic."<sup>120</sup> In February 1919 the LGB presented this statement:

the nature of the virus is still uncertain. It is possibly beyond the range of microscopic vision. The bacillus discovered by Pfeiffer, commonly known as the influenza bacillus, is not, on present evidence, to be regarded as the essential infectious organism of influenza. This bacillus, as also pneumococci, streptococci, meningococci, can however be regarded as important secondary or coincident infecting agents, and in any case seems to be responsible for most of the fatal complications of influenza.<sup>121</sup>

It seems that they had now settled on a virus, but they were as yet unwilling to completely dismiss Pfeiffer's agent. Others thought the Bacillus was at least part of

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<sup>119</sup>"Bacteriological and Pathological Observations of Influenza in France during 1918 by Major W.J. Wilson and Sergeant P. Steer," 8-9.

<sup>120</sup>J.A. Braxton Hicks and Elizabeth Gray, "An Investigation of Cases of Influenza Occurring in the Woolwich District During September, October, November, 1918," *The Lancet*, March 15, 1919, 420.

<sup>121</sup>The National Archives, "MEMORANDUM ON PREVENTION OF INFLUENZA," 1919, 3.

the cause of the often fatal septicaemia.<sup>122</sup> A group of researchers meeting about the disease in April 1919 still relied on Pfeiffer's bacillus as one of the causative agents, though they were vague about its purpose: "As regards the pathological process they say the disease is primarily an infection of the respiratory tract, in particular of the trachea and bronchi, which may be followed by oedema of the lungs with secondary infections. ... in a large number of cases the fatal results are brought about by two organisms – B.influenzae and streptococci."<sup>123</sup>

Many researchers did not find the influenza bacillus in the cases they studied, but this was ordinarily brushed aside with explanations that Pfeiffer's bacillus was easily overgrown in cultures. In other words, other bacteria would densely grow in the culture, making Pfeiffer's unnoticeable. The October 22<sup>nd</sup> LGB circular came to Pfeiffer's defense, for though it raised the question of whether the bacillus was the true cause, it continued to give it some credit:

The failure in a number of recent outbreaks which clinically resembled Influenza to find the Pfeiffer bacillus is noteworthy. It must, however, be borne in mind that this bacillus is easily overgrown in cultures and especially in cultures from sputum, and may consequently be overlooked. ... It is still an open question whether Pfeiffer's bacillus is the specific cause of Influenza, or whether in relation to this disease it occupies a position analogous to that of the pneumococcus or streptococcus, though perhaps a more important cause than these of the secondary complications

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<sup>122</sup>Septicemia is simply blood poisoning, here referring to the idea that a flood of bacteria was carried by the blood to vital organs, causing them to fail.

<sup>123</sup>"Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919."

of Influenza.<sup>124</sup>

As the evidence seemed to mount against Pfeiffer's bacillus, some began to believe influenza was caused by a virus, an organism small enough to pass through filters. This debate over Pfeiffer's bacillus was one of the most important of the time, because it was central to preventing, controlling, and curing the disease. In April 1919 when a group of prominent researchers met to discuss the disease, it was found that "No one had made any systematic observations on this point, either among contacts or in an uninfected population. It was felt that accurate knowledge on this point was much needed."<sup>125</sup> When George Buchanan wrote to Sir Walter Fletcher in May 1919, he said, "I gather that one or two of your workers at least are preparing to take up the question of distribution of Pfeiffer's bacillus in the normal population. This seems to me really one of the most important matters for inquiry in connection with epidemiology and the results should be of great value."<sup>126</sup> In April 1919 Dr. Western "thought it most urgent that the claims as to a filter-passing organism should be settled, in view of the effect which these announcements had had in weakening the position of Pfeiffer's bacillus. When this was settled we could concentrate on

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<sup>124</sup>"MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA," 3.

<sup>125</sup>"Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919."

<sup>126</sup>The National Archives, "Influenza Committee Correspondence with LGB and War Office," May 8, 1919.

whichever was the true cause of the epidemic.”<sup>127</sup> But some still considered the bacillus to be the key area of investigation. On November 4, 1919, Alexander Fleming received a letter that stated, “Your help will be most useful for a preliminary discussion we want to have about the possibilities of making a Pfeiffer vaccine available at some or at many centres for prophylactic use, either for the purposes of investigation or as giving guidance towards future administrative action, or both.”<sup>128</sup> Unfortunately for those living during the pandemic it would not be solved in 1918 or 1919. In 1920, George Newman, Chief Medical Officer, wrote, “We are, therefore, left at the end of the pandemic with our previous knowledge of Pfeiffer’s bacillus confirmed but not much extended.”<sup>129</sup>

Experiments were carried out in Britain and around the world to determine whether Pfeiffer’s bacillus was the cause of influenza. Solutions were made, often from the excretions of influenza sufferers, and transmitted to various animals, and even people. Sir Frederick W. Andrewes noted how some researchers had moved on to studying a filter passing organism (a germ that was still present after a substance had passed through a filter chosen by the researcher), and had success in reproducing

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<sup>127</sup>“Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919.”

<sup>128</sup>Ibid.

<sup>129</sup>George Newman, “Chief Medical Officer’s Introduction,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), ix.

“typical influenza” in a few people exposed to the substance.<sup>130</sup> At a British army hospital at Abbeville in France, Major H. Graeme Gibson, Major F.B. Bowman, and Captain J.I. Connor made experiments to find the cause of the disease in 1918. Using both filtered and unfiltered samples of influenzal secretions, they infected “baboons, *Macacus rhesus* monkeys, rabbits, guinea-pigs, and mice,” observing some signs (but not necessarily the fully developed disease) of influenza in each type of animal.<sup>131</sup> Despite these experiments they were still years from finding the answer, which unbeknownst to those at the time, would not come until the early 1930s, when the true source – what is now known as the influenza virus – was discovered.

Some ideas that had been well established in the 1890s became areas of debate in 1918 and 1919. One of the most significant of these was the question over ‘acquired immunity’, or whether people could be shielded from a future attack if they had suffered through a prior one. Parsons was decidedly against the idea when he wrote, “One attack of Influenza does not seem to be protective against another.”<sup>132</sup> He referenced a past visitation to prove his point: “The persons now living who passed through the disease in 1847 are of course comparatively few, but such persons have

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<sup>130</sup>Sir Frederick W. Andrewes, “The Bacteriology of Influenza,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 119-120.

<sup>131</sup>H. Graeme Gibson, et. al., “The Etiology of Influenza: A Filtrable Virus as the Cause,” in Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 19.

<sup>132</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 67.

not been exempt from the present epidemic.”<sup>133</sup> Those who chose to cling to acquired immunity had to find a way to reconcile the mounting discordant evidence. Althaus had a rationale for this inconsistency. He said, “I look upon the symptoms of influenza as due to the action in the system of a special toxine, secreted by a pathogenous bacillus.”<sup>134</sup> If the bacillus secreted more toxin, he claimed the symptoms would be worse.<sup>135</sup> This had bearing on the issue of acquired immunity: “Let us suppose that all the anti-grippe-toxine which has been formed in the serum is gone, and that the patient is again exposed to infection. A second or even third attack of grippe may then take place in the same individual.”<sup>136</sup> For those who believed in acquired immunity, it gave them a sense of hope, not only of the idea that sufferers had paid their dues and would escape in the future, but also that, in the grand scheme, the disease would naturally run its course and eventually burn out. Dr. T.P. Thomson echoed this latter idea when he wrote, “we may hope to see the pestilence leave us entirely, not returning until a fresh soil arises which will be suitable ground for the growth and spread of the germ. It is so with many other infectious diseases, and why not with influenza?”<sup>137</sup> But even in the 1890s the ideas against acquired immunity outweighed those in favor. In a

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<sup>133</sup>Ibid., 68.

<sup>134</sup>Althaus, 2.

<sup>135</sup>Ibid., 13.

<sup>136</sup>Ibid., 13-14.

<sup>137</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, February 6, 1892, 288.

footnote from the LGB's 1892 memorandum on the flu, they stated, "Abundant evidence has now accumulated to show that Influenza does not, in any marked degree, or for any considerable length of time, confer immunity against another attack."<sup>138</sup> In Parson's 1891 report he stated, "A disease that can be absent in an epidemic form for 30 years together cannot, even if a first attack confer immunity, avail to give the protection of a first attack to any large part of a population."<sup>139</sup> Writing in 1890, Thompson stated, "That one attack is not protective against future attacks."<sup>140</sup> An 1891 article in *The British Medical Journal* correspondingly argued, "In spite of considerable increase in our knowledge of the behaviour of epidemic influenza gathered during the past year, much still remains very mysterious. It is, however, certain that one attack does not protect from a second."<sup>141</sup>

The next generation approached the pandemic they were dealing with as if these authoritative statements over acquired immunity had never been written. Whether they were forgotten or ignored, when the next pandemic hit the issue was revisited. A letter to the editor of *The Lancet* in November 1918 stated the belief that

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<sup>138</sup>The National Archives, "Precautions against Epidemic Influenza," (London, England: MH 113/29, 1892), 1.

<sup>139</sup>*Ibid.*, 1.

<sup>140</sup>E. Symes Thompson, 434.

<sup>141</sup>"Epidemiology of Influenza," *The British Medical Journal*, May 2, 1891, 975.

a previous epidemic “confers on the individual an immunity.”<sup>142</sup> These ideas were largely the result of the shift in the ages of those who died. Doctors had been holding onto the idea that the young, and not the elderly, were disproportionately attacked in the first two waves of the pandemic because people above a certain age must have been exposed to influenza in the late 19<sup>th</sup> century pandemic. But even when these figures began to return to normal, in the third wave, they did not reject the idea that acquired immunity might exist. An article in *The Lancet* said, “There is also a wide impression that older people have lost the relative immunity... an opinion, however, not based upon exact figures and possibly having its origin in the invasion of every hitherto safe nook and cranny in the inhabited world.”<sup>143</sup> The above quote shows that when the idea of acquired immunity was preserved against mounting evidence, they used some other explanation to describe why circumstances were changing. Here, that explanation came in the idea that there was no one left for the disease to infect (certainly those already infected had acquired an immunity themselves). In the LGB’s February 1919 memorandum, they said,

Persons attacked by influenza in the summer of 1918 appear to have suffered less than the rest of the population in the following autumn epidemic. Relatively there were also fewer severe and fatal cases in the autumn among those who had previously been attacked in the summer. There is thus evidence that an attack of influenza may, for a few months at least, confer some degree of immunity against a second attack, and also

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<sup>142</sup>G. Archdall Reid, “Varieties in Influenza,” *The Lancet*, November 23, 1918, 723.

<sup>143</sup>“The Prevention of Influenza,” *The Lancet*, March 1, 1919, 346.

may diminish the severity of a second attack should it occur.<sup>144</sup>

In April of 1919 one writer expressed his idea that influenza granted a six month immunity on those who survived it, and that the stronger the attack, the more thorough the immunity.<sup>145</sup> Though conceding some ground, even the authors of the 1920 MOH report on the pandemic said, “It is, we think, probable that on the average and in the majority of districts, a previous attack of influenza confers some protection upon those again exposed.”<sup>146</sup> It was investigations like this, in which a verdict had been previously determined, that absorbed valuable time that might have been better spent elsewhere.

That these questions went unanswered in 1919 attests to the lack of knowledge present at the time. Little new insight was gained between the two pandemics. And though the medical community was afforded new instances for studying the disease, part of that group – the doctors – did not have the time or the equipment to do justice to the study. This lack of certainty affected treatment options and the advice they gave.

Science seemed to hold the answers, and it did, but contemporaries would not find them in this period. This is because they were working within an incorrect

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<sup>144</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 4.

<sup>145</sup>John George Gibson, “Acquired Immunity in Influenza,” *The Lancet*, April 5, 1919, 583.

<sup>146</sup>*Report on the Pandemic of Influenza, 1918-19*. Ministry of Health, 1920, 194.

framework that relied solely on visible microorganisms at the expense of invisible microorganisms that some still considered theoretical. The flu belonged in the latter category. With some difficulty, several researchers had observed Pfeiffer's bacillus in many influenza cases. Having a target focused the efforts of the medical and scientific communities. It gave them something to fight against. But the focus was wrong, and their fight was for naught. Pandemic influenza was a relatively rare occurrence, and there were not many opportunities to study it. There were also few qualified, or in possession of the right equipment, to dispute Pfeiffer's claims. The story told here would be different if Pfeiffer had been correct. There is much experimentation and theorizing in science, and the community of researchers were not at fault for what they had yet to learn.

## Chapter IV – The Public Response

For most people living in these years, influenza pandemics were regarded as an inconvenience. This is not to imply that there were not dire episodes during these events. On the contrary, at times people faced trials that we might consider astonishing and unbelievable. Some employers, for instance, had hundreds of people on the sick list, which meant that vacancies had to be filled or production or services came grinding to a halt. Schools closed for weeks or months at a time. People, prostrated with illness, collapsed in the streets. Some of them were carted off for treatment, but others were already dead. Today scenes like this might make many too frightened to leave their homes. Yet people were living in the midst of an invisible killer that was virtually everywhere, and for the most part the uninfected lived life as if circumstances were normal.

In circumstances like this one might expect dire pronouncements about the pandemics, but these types of statements were rare. In fact, many were directly opposite in tone. In January 1892 one journal wrote,

In the instance of influenza, however, not only has there been no panic, but there had been no senseless outcry, and no outpouring of that vague and sometimes useless philanthropy which is the distinctive characteristic of Englishmen deeply stirred. The people have helped one another with wonderful kindness, wonderful because of the sacrifices often involved; the doctors have worked themselves to death; the resources of all institutions have been strained to the uttermost; but the calm of the country has never given way. There has not been even emotion enough

to excite the public to a grand national subscription, the usual and often the healthy relieving outcome in England of any spasm of excitement.<sup>1</sup>

In general healthy people, and even many who fell ill, continued to perform their daily activities. There were many reasons for this. For one, in 1918, during the peak of the worst flu pandemic in recorded history, the Great War was still going on, and people saw it as their duty to continue working for the success of the nation. Another reason was the lack of any definitive medical knowledge about the disease. But the most convincing reason may be the statement above: the flu was invisible, and it was omnipresent.

English poet and author Robert Graves had been a soldier since the beginning of the Great War. In early 1919, he caught the flu while on assignment in Ireland. He was well aware of what this meant. In the mild wave that hit England in the summer of 1918 his mother-in-law had fallen ill. Graves recounts how she, not wanting to miss her son's leave from fighting at the front, took aspirin and went to the theaters in London with her son, but died of the disease a few days later. There was still no end in sight to the war, and apparently the little quality time she had with her son was her main concern. Graves says, "Her chief solace, as she lay dying, was that Tony had got his leave prolonged on her account."<sup>2</sup> It is impossible to tell whether she would have lived or not, but it would have been better for her to heed doctors' advice to stay in

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<sup>1</sup>"The Moral Effect of the Epidemic," *The Spectator*, January 23, 1892, 115.

<sup>2</sup>Robert Graves, *Good-Bye to All That* (New York: Anchor Books, 1998), 276.

and rest. Regardless, she went about her regular business, with fatal results. So, Graves knew the potential for this disease. By the time he fell ill the world had already passed through the second, and most fatal, wave, and with two prior lung conditions, he was not going to take any chances. Desperate to get home, he writes, “I did not intend to have influenza in an Irish military hospital with my lungs in their present condition.”<sup>3</sup> Eventually, he made it home, but the prognosis was serious. Being a young man, Graves was part of the primary demographic for succumbing to this strain of the disease. But despite his previous experiences with the flu and the information that he must have possessed simply by living through the event, like his mother-in-law the war provided the filter for his perceptions of this disease. This is clear when he writes, “having come through the War, I refused to die of influenza.”<sup>4</sup> In other words, the magnitude of the flu was either unknown, or was overshadowed by the war. For Graves, the flu paled in comparison to what he had seen in the trenches. Despite developing the worst complication, septic pneumonia, he eventually pulled through, along with the other members of his household who caught the disease. He was resolved about the flu, and in this he lacked signs of panic or terror. This is how most British people approached these flu pandemics.

There were rare instances, in the 1890s pandemic, when newspapers mentioned that the influenza pandemic was causing panic or alarm. Before the epidemic broke

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<sup>3</sup>Ibid., 283.

<sup>4</sup>Ibid., 285.

out *The Spectator* wrote, “Though from the point of view of the national health the influenza may be dismissed as of hardly greater importance than if it were an epidemic of toothache, its effects upon the ordinary life of the Metropolis are not unlikely to be somewhat startling, and, for the time at least, sufficiently inconvenient.”<sup>5</sup> The message here was one of precaution, for though they believed that the disease did not cause a significant loss of life, the worry was that if an entire household fell ill, as had happened on the Continent, the invalided people were in danger of starving.<sup>6</sup> When the disease actually hit England, reports about the mood of the people got slightly worse. On January 9<sup>th</sup>, 1890, when the epidemic had just begun, *The Times* reported, “The people seem to be thoroughly frightened at the epidemic, and the doctors say that many of the poorer classes, directly they feel a slight cold coming on, rush off for medical advice, declaring that they have got the influenza.”<sup>7</sup> On January 7<sup>th</sup>, 1892, during the height of the earlier pandemic, *The Times* said, “The rapid spread of influenza in Dorset is causing alarm.”<sup>8</sup> On January 21<sup>st</sup>, the similar claim was that, “The influenza in Dorset is causing quite a panic.”<sup>9</sup> But for the most part people do not appear to have been fearful. In May 1891, *The Spectator* wrote,

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<sup>5</sup>*The Spectator*, December 28, 1889, 918.

<sup>6</sup>*The Spectator*, December 28, 1889, 918-919.

<sup>7</sup>*The Times*, January 9, 1890, 7.

<sup>8</sup>*Ibid.*, January 7, 1892, 7.

<sup>9</sup>*Ibid.*, January 21, 1892, 5.

THE Influenza is talked about until the subject becomes tiresome; but nevertheless, the talking cannot stop just yet. A new disease which threatens to visit us annually, and always with augmented virulence, which makes existence miserable while it lasts... is altogether too annoying an addition to the incidents of life to be passed by in silence.<sup>10</sup>

The article further stated, “The pestilence does not, it is true, excite the imaginative horror inspired by cholera or yellow-fever, because it spares the lives of most of its victims, and when not mortal, is distressingly inconvenient rather than agonizing; but it kills a great many people, and picks them out in a very alarming way.”<sup>11</sup> The danger, or the alarm, that the writer was referring to was the death of the notables of society, which the author argued were more important than most individuals because of the amount of people that each notable served.<sup>12</sup> There was another group that may have attempted to contribute to a sense of fear: “The clergy, we perceive, are beginning to try to break the calm, to use their moral opportunity, and to endeavour to bring their permanent topics, the nearness of death and the uncertainty of life, home to minds which in their hearts they characterize, sometimes justly, sometimes unjustly, as unreflecting.”<sup>13</sup> But this message could not be maintained if churches were forced to close because the clergy themselves were ill.<sup>14</sup> In some instances, having passed

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<sup>10</sup>“The Influenza,” *The Spectator*, May 23, 1891, 718.

<sup>11</sup>Ibid.

<sup>12</sup>Ibid.

<sup>13</sup>“The Moral Effect of the Epidemic,” *The Spectator*, January 23, 1892, 115.

<sup>14</sup>“The Influenza,” *The Times*, February 3, 1892, 9.

through the disease became a badge of honor. On January 11, 1890, the Birmingham correspondent for *The British Medical Journal* wrote, “is the epidemic influenza in our midst or not? is a question eagerly discussed by all classes, both lay and medical. A few people assert with confidence that they have been declared by their medical advisers to have had ‘Russian Influenza,’ but these are probably examples of vainglorious boasting.”<sup>15</sup> For others, it made them appreciate life. In 1891 one writer noted that the experience of the epidemic was not entirely negative, and could produce positive results. He predicted that “Touches of nature like this make us all akin and help to sweeten and brighten political as well as social life.”<sup>16</sup> Sometimes, practitioners were exasperated that the public (and even some of their own profession) were not taking the disease as serious as they were. In 1892 Dr. Julius Althaus frustratingly wrote, “Experience has indeed shown the popular belief that ‘influenza is not much of a disease,’ to be utterly fallacious... Unfortunately this ‘bogey’ has proved a fearful reality for many people who have lost their lives or their health through it!”<sup>17</sup> This is similar to a statement made by Arthur Newsholme in a Local Government Board [LGB] memorandum in October 1918. In it, Newsholme said,

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<sup>15</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 11, 1890, 96.

<sup>16</sup>Robert Farquharson, *The Times*, May 19, 1891, 5.

<sup>17</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> Edition, (London: Longmans & Co., 1892), 10.

If every person who is suffering from Influenza or catarrh recognised that he is a likely source of infection to others, that some of the persons infected by him may die as the result of this infection, and took all possible precautions, the present disability and mortality from catarrhal epidemics would be materially reduced.<sup>18</sup>

True prevention would only come when people cared. But even the government couched the pandemic in strange and benign terms. A 1919 LGB memorandum nonchalantly said, “all parts of the country participated in both phases of the epidemic.”<sup>19</sup> “Participated in” is a long shot from something like “was seized by” or “was in the grips of,” or some other terminology that might evoke an atmosphere of fright or even anxiety. More often, though, “alarming” was used to describe the character or spread of the disease, which has the quite different implications of surprise or astonishment rather than anxiety. And there are varying degrees of alarm.

Instead of propagating these ideas, at both times the populace was urged to remain calm. This was declared with the utmost importance, and sometimes came from the highest medical authorities. According to Liverpool’s medical officer in 1892, “The only advice that could be given to the public was to avoid anything like a panic or anticipating evil.”<sup>20</sup> In 1889, when *The Spectator* was predicting an imminent outbreak, it concluded with some comforting remarks: “The influenza, then, must not

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<sup>18</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 7.

<sup>19</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA,” 1919 (London, England: MH 10/84), 1.

<sup>20</sup>*The Times*, February 5, 1892, 4.

be taken too tragically. It has to come, but it is not going to kill many of us. The best thing we can do is to accept the fact as light-heartedly as possible.”<sup>21</sup> An 1892 article in *Punch* finds Robert the waiter giving his advice on how to beat the flu. He said, “In times like these, dine out reglar either two or three times a week, and drink generously, but wisely, not too well, and on receiving the accustomed At, think of the ard times the pore Waiter has had to pass through lately, and dubble, or ewen tribbel the accustumd Fee.”<sup>22</sup> The message seems to be to get out, enjoy the open air, and do not change your habits. The reason for this passivity may have been a variety of factors – “The truth seems to be that, novel as the disease is, in this generation at least, the homely familiarity of its inaccurate name – for ‘influenza’ by usage has come to mean a severe cold – and the usualness of its symptoms have tended to soothe away any general alarm.”<sup>23</sup>

Given the current hype surrounding the 1918-1919 pandemic one might think that the message changed, but it did not. A November 2, 1918 article in *The Spectator* simply said that the pandemic was “exciting the utmost concern.”<sup>24</sup> People were still advised to remain calm. In 1918 a writer for *The Times* stated it plainly, saying, “Fear is certainly the mother of infection. To go about expecting influenza is to invite it.

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<sup>21</sup>*The Spectator*, December 28, 1889, 919.

<sup>22</sup>“Robert’s Cure for the Hinfluenzy,” *Punch*, February 20, 1892, 96.

<sup>23</sup>“The Moral Effect of the Epidemic,” *The Spectator*, January 23, 1892, 115.

<sup>24</sup>*The Spectator*, November 2, 1918, 475.

Such an attitude lowers one's natural resistance, just as it lowers one's natural resistance to external enemies. The alarmist and the defeatists are the allies of the epidemic."<sup>25</sup> The writer of the report for the Ministry of Munitions's Aircraft Production Facility was assured that through the measures they had taken to control the disease "the fear of the epidemic has been allayed, which in itself is a great factor in warding off the disease."<sup>26</sup> In the absence of being able to do anything to substantially impede the disease, control and management was shifted to the individual. "The surest way to catch any prevalent epidemic is to worry about it or to be afraid of it," said one article.<sup>27</sup> This continued into 1919. In February the LGB told people, "Carefulness does undoubtedly decrease, and carelessness increase, both sickness and death; it is important, therefore, that the public should have a clear idea of such measures of personal protection as are available against infection. The individual must be taught to realise and acquiesce in his duty to the community."<sup>28</sup> It was suggested by the LGB that local authorities disperse a prepared leaflet to the public. In it, this advice was given:

1. The golden rule is to keep fit, and avoid infection as much as possible.

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<sup>25</sup>*The Times*, October 31, 1918, 7.

<sup>26</sup>The National Archives, "Central Establishment Notice No. 82, Precautions Against Influenza," (London, England: MUN 4/3702, 1919).

<sup>27</sup>*The Times*, October 28, 1918, 7.

<sup>28</sup>The National Archives, "MEMORANDUM ON PREVENTION," 1919, 4.

2. The way to keep fit is to cultivate healthy and regular habits, to eat good food, and to avoid fatigue, chill, and alcoholism. Healthy living does not of itself ensure against attack, but it makes the patient better able to withstand the complications which kill. ...

4. It is not always possible to avoid infection, but the risks can be lessened by –

- (a) healthy living;
- (b) working and sleeping in well-ventilated rooms;
- (c) avoiding crowded gatherings and close, ill-ventilated rooms;
- (d) wearing warm clothing;
- (e) gargling the throat and washing out the nostrils;
- (f) by wearing a mask and glasses when nursing or in attendance on a person suffering from influenza.<sup>29</sup>

An article that ran in March said that an individual's natural resistance to disease "is lowered by cold, exposure, hunger, fear, anxiety, illness, and so on."<sup>30</sup> If maintaining the proper state of mind was as important a measure as anything else, then keeping oneself from worrying would be the wisest way to proceed. But that is only one explanation for why people were resolved in the ways they were.

Another reason that the public did not feel the need to become alarmed was due to the vast amount of people who survived the previous visitations. In some places around the world the flu could be devastating. For instance, in 1918 some North American Inuit villages were nearly decimated. But in Britain both occurrences rarely infected more than half of the population, while typically death rates in the localities were less than 6% of the population. In 1918 and 1919 official figures show

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<sup>29</sup>The National Archives, "Specimen Leaflet of Advice to Public on Precautions to be Taken Against Influenza," (London, England, MH 10/84, February 1919).

<sup>30</sup>*The Times*, March 3, 1919, 7.

that for England and Wales recorded influenza deaths were less than 1% of the entire population.<sup>31</sup> And in the previous pandemic, the numbers were even lower. In 1891 Dr. Parsons wrote,

There appears to be no doubt that as compared with many countries on the continent of Europe, England experienced the Influenza epidemic of 1889-90 comparatively lightly. Although at the height of the epidemic the number of persons disabled was sufficiently large to cause serious inconvenience, yet there was at no time any serious disorganization of the public services, such as was reported to have been caused by the epidemic in some continental countries.<sup>32</sup>

The recorded figures illustrate this point well. Writing about the epidemic of 1890, Sisley stated that “[according to the Registrar-General] ‘the total number of deaths due directly or indirectly to the epidemic influenza was... 27,074, or 91 per million living’. On this computation, the increase in the death-rate due to influenza was 0.941, or nearly 1 per 1,000 inhabitants.”<sup>33</sup> In other words, in 1890 one out of every 1000 people more died than was the usual case. When the Medical Officer of Health in Manchester asked how many workers had suffered from the disease in 1890, he found a very low percentile. Of 146 firms surveyed, “less than two per cent. of this large population [of 23,000 workers] were actually suffering from Influenza at the period

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<sup>31</sup>Approximately .55% based on 1911 population figures. Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 31-4.

<sup>32</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 109.

<sup>33</sup>Richard Sisley, “A Study of Influenza; and the Laws of England Concerning Infectious Diseases,” *The British Medical Journal*, January 23, 1892, 168.

referred to.”<sup>34</sup> Mortality among the military was low in 1889 and 1890, with a total of only 9 people dying, “at a rate of 77 per million strength at the affected stations, or 1.1 per 1,000 cases.”<sup>35</sup> The condition of Sheffield in 1891 was generally held by contemporaries as an especially severe one, but even there, where approximately one-third of the city was infected with the disease, the total death rate (for any reason) was only 57 per every 1000 people.<sup>36</sup> If that figure was comprised completely of people who died due to the flu or its complications, it would still represent less than six percent of the total population of the city. Of course, the actual influenza number was much lower because there were many reasons for which people died. The case was much the same in other areas. Mr. W. Tibbles, the Medical Officer of health for the Melton Mowbray Rural Sanitary Authority, wrote that “The average death-rate of the district for the last nine years is 15.5 per 1,000,” but in the first quarter of 1890 it averaged about 21.2 per 1,000.<sup>37</sup> If it is assumed that these are due entirely to influenza, that is an excess of less than 6 per 1000 due to the disease. On the whole, though, it was less than these figures. During the influenza epidemic in Manchester in

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<sup>34</sup>Dr. Tatham, “Memorandum on Influenza Prevalence in Manchester,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 280.

<sup>35</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 156.

<sup>36</sup>*The Times*, April 28, 1891, 5.

<sup>37</sup>Mr. W. Tibbles, “Report,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 274

1890 there were only 45 total deaths above the excess.<sup>38</sup> The figure for all of England and Wales for influenza deaths in 1890 was only 1 in 1000.<sup>39</sup> Even in those infected the number was low. Writing in 1890, E. Symes Thompson said, “The mortality in this country, so far as one can judge, does not appear to have exceeded, even if it attained, 1 per cent of the cases.”<sup>40</sup> Dr. Cameron, Medical Officer of Health for Leeds, estimated that 500,000 people were infected in 1889 and 1890.<sup>41</sup> Yet relatively few people died. Even a doctor like Althaus could state that “The prognosis of the uncomplicated feverish attack is... favourable, as shown by the comparatively small number of deaths, when compared with the immense number of cases which have occurred.”<sup>42</sup> And historical comparisons might make the situation look even better. In 1891 Sir Peter Eade wrote, “neither as to 1890 or 1891 do I think we should be justified in repeating the assertion made by one writer on this subject as to the epidemic of 1738, that ‘the influenza was specially fatal in Norwich’.”<sup>43</sup>

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<sup>38</sup>Dr. Tatham, “Memorandum on Influenza,” 283.

<sup>39</sup>*The Times*, January 20, 1892, 14.

<sup>40</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), 409.

<sup>41</sup>*Ibid.*, 445-446.

<sup>42</sup>Althaus, 328.

<sup>43</sup>Sir Peter Eade, “Influenza in 1891,” *The British Medical Journal*, August 8, 1891, 309.

There also seemed to be logical reasons for why numbers might be high in one place over another. Althaus wrote, “The civil population... contains, not only aged and infirm persons, but also many whose strength has been undermined by unfavourable conditions of life, poverty, and chronic disease.”<sup>44</sup> Even in an otherwise healthy group of people “A great many persons... cannot afford to rest, or to have a doctor, but have to go on with their work and expose themselves to all kinds of weather while struggling against a most debilitating malady.”<sup>45</sup> Many people continued to live as if they were not ill at all. This was a common response in one doctor’s practice in 1889, as “many patients fight it out and go on with work as usual.”<sup>46</sup> But *The Spectator* commented on how pointless this course of action could be: “To do your duty as our fathers understood it, and fight against illness to the last, succumbing only when the physical power to keep up has disappeared, is to invite death, and render the effort of science to aid you hopeless from the beginning.”<sup>47</sup> And though the public and practitioners alike were not entirely certain about the infectious nature of the disease, this type of action could be detrimental to others around them. Parsons recorded the case of a school where a woman who delivered candy felt ill but

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<sup>44</sup>Althaus, 324.

<sup>45</sup>Althaus, 325.

<sup>46</sup>W. Gordon Hogg, “The Epidemic of Influenza,” *The British Medical Journal*, December 21, 1889, 1419.

<sup>47</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

did not stay home, and introduced the disease to the children.<sup>48</sup> In reality, everyone was susceptible, because as Parsons noted about Britain, “No one in this country leads the life of a hermit.”<sup>49</sup> But though everyone had the opportunity to catch the disease, not everyone did. Numbers for this varied in each outbreak, but Parsons came up with an estimate for 1889-1890. He wrote that “Using the figures of certain public services and large establishments as the basis of a rough guess, we may estimate the proportion of persons in and near London disabled by influenza as about 25 per cent., or 1 in 4, among those employed in large offices, and about 12½ per cent., or 1 in 8, among those employed out of doors.” And these numbers, he argued, were much higher than those for the rest of Britain.<sup>50</sup> This, among other things, led him to not recommend isolation for the general public: “owing, on the one hand, to the comparative mildness of the disease to be guarded against, and on the other hand, to the wide diffusion of the infection and the difficulty of recognizing its presence, any such measures applied to the general population would be impracticable: the game would not be worth the candle, even if success were ensured.”<sup>51</sup> An article in *Punch* in February 1892 gave the lyrics for “An Influenza Song.” After everyone in the house has fallen ill with the

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<sup>48</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 205.

<sup>49</sup>*Ibid.*, 92.

<sup>50</sup>H. Franklin Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” *The British Medical Journal*, August 8, 1891, 306.

<sup>51</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 118.

flu, the last stanza begins with this phrase: “As the Doctor orders Port, Orders Burgundy, Champagne, Good living and good drinking, Why we none of us complain.”<sup>52</sup> The people could still maintain an optimistic tone even if everyone fell ill. And given these factors, if there was an impact it did not last long. Recall the experience of Sheffield, described above. Before the disease had left the city, *The British Medical Journal* wrote, “The influenza is showing a continued and very marked decline, and the epidemic will soon be numbered among the memories of the past.”<sup>53</sup> In 1892 *The Times* stated that “Over two years’ suffering and a death roll of almost appalling magnitude are beginning to force the reality of the danger into men’s minds.”<sup>54</sup> But did it really have this effect? If influenza *had* made a lasting impact, it would have been more feared when it reappeared.

In that most esteemed pandemic that came in the latter 1910s, the mortality figures were not that much higher. According to government reports, in the entire 1918-19 pandemic the death rate due to influenza was 4774 per million, which represents less than half of one percent of the total population. Even their revised estimate of 200,000 dead (which was logically extrapolated from data, not just from the survey responses collected) only yields approximately 6304.5 per million, which

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<sup>52</sup>“An Influenza Song,” *Punch*, February 20, 1892, 93.

<sup>53</sup>“Influenza,” *The British Medical Journal*, May 30, 1891, 1195.

<sup>54</sup>*The Times*, January 25, 1892, 4.

represents .63% of the total population.<sup>55</sup> In a non-epidemic year, like 1915, pneumonia alone was responsible for approximately 1,359 deaths per million.<sup>56</sup> Hebburn, which had the highest mortality in 1918 and 1919, had an influenza death rate of 11.9 per 1000. Jarrow, the second highest, had 8.8, while all of London only had a rate of 5.1.<sup>57</sup> Of course it was unpleasant for family and friends who died, but the odds were in favor of the population at large. The newspapers carried distressing stories of entire families who died. But there were also entire families who fell ill and lived, or who did not catch it at all. Robert Graves writes that nearly his entire household fell ill in the late winter of 1918-1919, and yet everyone recovered [despite his catching one of the worse types of the disease].<sup>58</sup> When Dr. Herbert French compiled his chapter for the Ministry of Health's 1920 report on the pandemic, he downplayed the significance of the disease. He said,

it is important to emphasize the fact that, although it was the "pneumonic" type of case that attracted so much attention, creating such consternation owing to its mortality, and thereby colouring the picture of the epidemic as a whole, these fatal "pneumonic" cases constituted but a minority of the whole. There were far more cases of ordinary straight-forward benign influenza than there were of "influenzal-pneumonia"; but these benign

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<sup>55</sup>Great Britain, *Report on the Mortality from Influenza in England and Wales During the Epidemic of 1918-19: Supplement to the Eighty-First Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales* (London: H.M. Stationery Office, 1920), 3, 7.

<sup>56</sup>"MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA," 1.

<sup>57</sup>*Report on the Mortality From Influenza in England and Wales*, 57, 29.

<sup>58</sup>Graves, 285.

cases were overshadowed by the grave ones; and there is a little danger, if one does not emphasize the fact, that the future generations might gain the impression that the whole of the 1918-19 epidemic was of “pneumonic” and grave character. Broadly speaking, I should say that out of 1,000 individuals stricken by the disease fully 800 had no more than an ordinary attack of uncomplicated “influenza,” a little more severe perhaps than the “three-day fever” of June 1918, but not any worse than simple influenza as it may occur at any other time. It was the remaining 200 who were so much more seriously ill, with “pneumonic” symptoms added to those of simple influenza; and of these about 80 died.<sup>59</sup>

In other words, 80% of those infected with influenza in the worst periods, the fall of 1918 and the spring of 1919, developed typical influenza. Only 8% of those attacked died. All that one had to do was wait it out: “Within a short time we may hope to see the plague decline, as it seldom lasts in a virulent form in any one area more than a few weeks.”<sup>60</sup> Remembering was done and history was written by the survivors, and if the effects on the individual and his or her acquaintances were slight, then the effects of the disease as a whole were seen as minor.

Another element that added to the public’s response was the lack of any uniform medical knowledge concerning everything from how the disease operated [with the exception of its potential symptoms] to how it should be treated, and this had strong implications for how the public responded to these pandemics. There was nothing even remotely close to today’s commonly known medical links, between

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<sup>59</sup>Herbert French, “The Clinical Features of the Influenza Epidemic of 1918-19,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 69.

<sup>60</sup>*The Spectator*, November 2, 1918, 475.

things like smoking and cancer, excessive alcohol consumption and liver disease, or fried foods and heart disease. Instead, people were given advice that largely amounted to living a regular lifestyle. An article published in *The Times* on November 1<sup>st</sup>, 1918 suggested that readers who wanted to stay healthy “don’t expect to fall sick. Eat as well as possible; drink a half bottle of light wine or a glass of port at dinner. Take a hot bath each evening on returning from work. Smoke in moderation. If there is any tendency to sore throat, consult a doctor at once.”<sup>61</sup> Similar statements had been made in a memorandum issued by the LGB almost thirty years before, in January 1892. This document began by explaining the general impotence of the medical community: “In view of the difficulties referred to, it is not practicable to devise any restrictive measures for the preventions of the spread of influenza which shall be universally applicable.” It also reaffirmed the importance of the state of the individual by saying, “The liability to contract influenza, and the danger of an attack, if contracted, are increased by depressing conditions, such as exposure to cold or to fatigue, whether mental or physical.” As far as what measures the public should take, the memo cautioned against gathering in groups, but other than that only said individuals’ resistance can be strengthened by “wearing clothing of suitable warmth, and avoiding unnecessary exposure to cold and fatigue, unwholesome food, and excessive use of alcoholic liquors.”<sup>62</sup> In both pandemics moderation was the key, but

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<sup>61</sup>*The Times*, November 1, 1918, 7.

<sup>62</sup>*The Times*, January 25, 1892, 4.

there were no measures that were particularly restrictive. Even public health authorities did not impede daily activities. In the pandemic of 1918-19, some schools were closed, though this varied by locality, and while some people urged regulations against public places such as music halls, public houses, or cinemas, and while local authorities closed some, most were only required to be cleared and aired out every few hours [the exception being for children under fourteen, who were often legally disallowed from attending the theaters during the outbreaks]. While these restrictions may have caused minor inconveniences, for the most part it was business as usual. In the 1890s observers had realized that this was troublesome. In 1891 Dr. R. Bruce Low wrote that “Churches, chapels, theatres, parties, and schools have all to some extent aided the spread of Influenza.”<sup>63</sup> Pubs were to blame, too: “it is not unlikely that the nightly assembling of these rustics to drink beer and discuss the news of the day, would give a favourable opportunity for a general infection.”<sup>64</sup> But people did not change their habits in the 1890s, and they did not change them in the late 1910s, either.

One of the reasons that regular activity was not restricted was due to the beliefs of what constituted healthy behavior. For one thing, getting outdoors and being exposed to fresh air, when taken with the above precautions, was seen as a

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<sup>63</sup>R. Bruce Low, “Notes on Influenza in Lincolnshire and East Yorkshire,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 243.

<sup>64</sup>*Ibid.*

health benefit. A July 2<sup>nd</sup>, 1918, article in *The Times* reported, “Those attacked are generally engaged in indoor occupations. In this, as in previous epidemics, persons engaged in outdoor occupations are practically immune.”<sup>65</sup> In January the next year another article reiterated this, saying, “It is better to avoid crowded places and hot places. Chills should also be avoided very carefully, but fresh air is most valuable.”<sup>66</sup> The *Daily News*, carried the same belief when it said, “Breathing as much open air as possible and avoiding being in crowded places is the best precaution that can be taken against contracting influenza.”<sup>67</sup> As long as one wore the proper attire, they were not advised to stay indoors. Another reason that people might continue their daily activities was the belief that being fit was a prime way to stave off illness. To explain how some people could survive dips in icy water without developing a cold, one article in 1918 said, “The difference is all in the bodily condition at the time. When a person is strong, hearty, able to enjoy a brisk, cold day, chills and infections are set at defiance. But when the system is below par, run down, bloodless and nervous, the germs of influenza are quick to seize their opportunity.”<sup>68</sup> Another said to “Keep a

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<sup>65</sup>*The Times*, July 2, 1918, 3.

<sup>66</sup>*Ibid.*, January 31, 1919, 5.

<sup>67</sup>*Daily News*, October 11, 1918, 3.

<sup>68</sup>*Ibid.*, November 8, 1918, 3.

stout heart.”<sup>69</sup> The LGB advised caution when in public, but not so much that it should interfere too much with daily life. They said,

During influenza prevalence those who are able to do so will diminish their chance of contracting the disease by keeping away from all places of public resort and all crowded conveyances. Other persons are in most cases at least able to avoid some occasions of forming part of a crowd or assembly, without prejudice to their necessary occupations, and should do so.<sup>70</sup>

For people who had yet to fall ill, it was activity, and not rest, that was prescribed.

A lack of any real knowledge about how the disease operated could also keep people in their daily routines. The writer of an article on October 26, 1918, said, “inconvenience will be borne gladly enough if by that means the scourge can be stamped out, or at least brought under a greater measure of control.”<sup>71</sup> But official action was piecemeal because authorities had nothing useful to advise people to do. The situation was much the same in 1918 as it was in 1892, when Dr. Richard Sisley remarked,

Owing to the present state of knowledge or of ignorance which exists amongst the people of this country with regard to disease, it is advisable that sanitary authorities should not use any powers they possess unreasonably or without a fair chance of their being successful in accomplishing the end in view. The old idea that an Englishman’s house is his castle still exists and is strongly held by the masses of the people,

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<sup>69</sup>*The Times*, November 1, 1918, 7.

<sup>70</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA,” 5.

<sup>71</sup>*The Times*, October 26, 1918, 7.

and all interference with what is considered personal liberty is strongly resented.<sup>72</sup>

Though this was not the case everywhere in every year, caution combined with ignorance often led to doing nothing. Even in those fields where advances had been made by 1918, it is difficult to measure how people might have acted differently. In 1918, some experts knew that contagiousness was highest in the early stages of the disease, before people even showed symptoms. But even by 1920 there was no consensus on this point. The 1920 Ministry of Health report stated, “It also appears probable that the patient is most dangerous in the early stages of his illness; it may even be that there is infectivity in the prodromal stage before the patient experiences any physical inconvenience.”<sup>73</sup> Had this been widely accepted at the time, however, how would people have prepared or responded to it? They lacked information about the specific causative agent, which means they lacked any definitive test to determine whether they were infected. Would there have been any point in changing a daily routine if everyone was a potential invisible carrier? In 1892 *The Times* had written, “The fact that almost every one is susceptible is a scientific truth not likely to impress the popular imagination, and lead to precautionary measures.”<sup>74</sup>

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<sup>72</sup>Ibid., January 20, 1892, 14.

<sup>73</sup>*Report on the Pandemic of Influenza, 1918-19*, 130.

<sup>74</sup>*The Times*, January 25, 1892, 4.

The public's response did not manifest itself in anarchy, and most people did not shut themselves indoors, which means that if they were overcome by hopelessness, it appeared as complacency or apathy. Newspaper articles illustrate that the people as a whole either did not know or did not care about the disease. As early as July 3<sup>rd</sup>, 1918, there were descriptions of people collapsing in the streets. In the fall this escalated. On October 26<sup>th</sup>, *The Times* reported that twenty-five people who, falling ill in the London streets, had to be taken away by ambulances.<sup>75</sup> On October 28<sup>th</sup> the number rose to fifty-eight, while on the next day there were 61.<sup>76</sup> Some experienced this same sensation in the previous pandemic. In 1891 one doctor recorded two cases in which patients had "collapsed as though they had been violently kicked over the solar plexus."<sup>77</sup> People may not have known they were ill. In 1891 Parsons wrote, "in an epidemic of Influenza, besides the severe and well-marked cases, many persons suffer from lighter and transient ailments, as headache, catarrh, or a feeling of lassitude with flying pains in the limbs, which are not of sufficient severity to prevent their going about their business and mixing with other people as usual."<sup>78</sup> They may not have

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<sup>75</sup>Ibid., October 26, 1918, 7.

<sup>76</sup>Ibid., October 28, 1918, 3 and October 29, 1918, 7.

<sup>77</sup>Robert M. Simon, "Cases of Influenza with Severe Abdominal Pain and Collapse," *The British Medical Journal*, June 13, 1891, 1275.

<sup>78</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 86.

cared. Either way, there was no reason for them to change their habits. In 1892

Sisley included a story related to him by a doctor in Hertford:

In January 1890 a daughter of the house went to London to see her dentist, who was then so ill with influenza that he was scarcely able to stand, but he managed to perform various dental manipulations for more than half an hour. The girl came home feeling well; felt ill soon after getting home, and was quite collapsed at 10 p.m. The case was a severe one, and was followed by the illness of two sisters.<sup>79</sup>

Similar scenes occurred in 1918 and 1919. Upon arriving in Paddington station on February 14<sup>th</sup>, 1919, Robert Graves was lucky enough to secure a taxi. There he met an officer and his wife, and politely asked them if they wanted to share the cab with him, despite making it fully clear that he was ill with the flu. This was at the beginning of the third wave, and though people did not know what this wave would be like, the memories of that second deadly autumn wave must have still been fresh. Given the current discourse on the flu people living today would likely decline this offer, and yet this couple jubilantly accepted his invitation.<sup>80</sup> We have no insight into what this couple was thinking when they agreed to step in the cab, nor do we know what happened to them afterwards. There is no answer to the question “why” or “how,” but given the factors at work there could have been a variety of reasons. There is, however, no sense that during the entire voyage they felt fear. And was this really such a strange response as we might imagine today? Even in 1892, Julius Althaus was

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<sup>79</sup>Sisley, *Epidemic Influenza*, 85.

<sup>80</sup>Graves, 284.

aware that “Persons... who are going about at a time when influenza is prevalent, have numerous chances of coming in contact with unrecognised cases of the malady.”<sup>81</sup>

According to Sisley, in 1890 there was

A lady in good health, mistress of a large and healthy household, [who] went up to London and spent the day in shopping. She was taken suddenly ill the following evening with severe influenza... A large number of the staff at each of the three of the establishments at which this lady called and spent sometime while in London, are known to have been then down with influenza.<sup>82</sup>

The probability of coming into contact with the disease was high, and there was scarcely anything to do to prevent it. That realization alone might be enough to keep people from altering their daily routine. Current medical knowledge tells us that a relatively large percentage of people are completely unaffected by influenza. They did not need our current level of technology to understand this fact. A perusal of data revealed it in the 1890s, when Parsons wrote, “all are not equally susceptible, and of a number of persons placed under circumstances the most favourable for contracting it, some always escape.”<sup>83</sup> If people did not perceive it as a substantial threat, then they were given an even greater reason for maintaining the status quo in their personal lives.

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<sup>81</sup>Althaus, 310.

<sup>82</sup>Sisley, *Epidemic Influenza*, 85.

<sup>83</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 66.

But surely not everyone was calm all the time, so how did these feelings manifest themselves? The most common response was that people flooded doctors' offices and pharmacies. This type of response was not uniform – at times it was stronger than at others – but it was a recurring element. The Glasgow correspondent for *The British Medical Journal* wrote, in January 1890, “It is a point worthy of consideration also that the fear of the ‘Russian Influenza,’ as it is popularly termed, is so great that many cases are coming under medical notice which, but for this fear, would not have been heard of.”<sup>84</sup> In May 1891 *The Times* reported, “At Leeds the doctors have their hands full, and the tax upon the medical staff at the infirmary and the dispensary is very great.”<sup>85</sup> In Birmingham one hospital saw 600 new influenza patients in one day.<sup>86</sup> One London doctor had 700 ill patients in his care at this time.<sup>87</sup> It was so intense that “The doctors [were] utterly unable to cope with the number of cases.”<sup>88</sup> This was repeated in January 1892, during the height of this pandemic. From Dover, Dr. Parsons wrote, “The influenza ‘scare’ has so frightened the public, that everyone who takes a severe cold puts it down to influenza at once.”<sup>89</sup> In Fulham,

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<sup>84</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 11, 1890, 96.

<sup>85</sup>*The Times*, May 8, 1891, 10.

<sup>86</sup>*Ibid.*, May 15, 1891, 7.

<sup>87</sup>*Ibid.*, May 9, 1891, 12.

<sup>88</sup>*Ibid.*

<sup>89</sup>“Influenza,” *The British Medical Journal*, January 9, 1892, 77.

a doctor and his assistant worked 12 hour shifts.<sup>90</sup> In Kingston-on-Thames, “The doctors complain[ed] of being overworked, and several of them... contracted the disease themselves.”<sup>91</sup> Another source stated that “doctors everywhere [were] exhausted with work, and... the demand for trained nurses [had] completely beaten the supply.”<sup>92</sup> The doctors were busy again in 1895. Though milder than the previous outbreaks, *The Times* did say that “In all parts of the metropolis the doctors are attending to an unprecedented number of cases.” It followed this by driving the point home, stating that offices were open until late hours and on Sundays.<sup>93</sup> According to *The Spectator*, these were ordinary and logical European responses. A January 1890 article began by describing the “Oriental” attitude: “An Asiatic never falls into a panic about cholera, is unmoved by menaces of famine, and will drown in a flood almost without fighting for his life.” The writer says that this is due to their belief system, but that he is “half-inclined to doubt whether the Oriental fearlessness about epidemics and other great catastrophes could be attained in Europe.” In his view, Europeans were too action-oriented to do nothing, and if they were idle, it was because they had attributed the disease to something they could not do anything to change. He further wrote, “This influenza is far more annoying in its effects on comfort, on profits, on

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<sup>90</sup>*The Times*, January 4, 1892, 7.

<sup>91</sup>*Ibid.*, January 14, 1892, 10.

<sup>92</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>93</sup>*Ibid.*, February 28, 1895, 3.

wages, and on the lives of the aged and weak, than many an evil which drives Europeans frantic with energy; but nobody swears, or screams, or offers impossible suggestions, or even goes crazy after some unreasonable quackery.”<sup>94</sup> And anyway, why would the public believe that it was a dangerous disease when the medical community was not thoroughly convinced? In 1891 Dr. Alfred Ashby, Medical Officer of Health for Reading and Workingham, said, “Influenza is infectious from one person to another, but not to so great an extent as such diseases as measles, small-pox, &c.”<sup>95</sup>

When the next pandemic hit, the same rush to the doctors’ offices occurred almost immediately. On July 3, 1918, *The Times* presented the case in Birmingham, where “the doctors are at their wits end to know how to deal with the number of patients. One doctor found 178 patients waiting for him when he arrived at his surgery.”<sup>96</sup> In the autumn wave there were reports of long lines at chemists’ shops in Sheffield.<sup>97</sup> This was despite a statement made in 1890 that the treatments people were using then (and still were using in 1918) could be detrimental: “Antipyrin, salicin,

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<sup>94</sup>“The Influenza and European Fatalism,” *The Spectator*, January 11, 1890, 49.

<sup>95</sup>Alfred Ashby, “Influenza in the Reading Urban and Workingham Urban and Rural Districts,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 279.

<sup>96</sup>*The Times*, July 3, 1918, 3.

<sup>97</sup>*Ibid.*, October 30, 1918, 7.

and the salicylates have been very extensively resorted to, often by the patients themselves, and not rarely with the effect of producing inconvenient and even disquieting symptoms.”<sup>98</sup> Thompson was not alone. Another doctor wrote, in 1890, “As for antipyrin and its congeners, most of the deaths in the late epidemic are, I think, to be attributed to their use.”<sup>99</sup> Dr. Richard Sisley blamed this on the media: “People in less enlightened towns are taught by the newspapers, and there is an unfortunate tendency amongst the people to trust more to ‘cures’ than to prevention. We still live in the Drug Age.”<sup>100</sup> Despite the lack of a treatment, people still poured into doctors’ offices. The demand for medical practitioners was so high that in Dublin in 1918, a doctor who had been arrested for attending a Sinn Fein meeting was released so that he could attend to flu patients.<sup>101</sup> In the spring wave of February 1919, the paper used the word “besieged” to describe the situation at chemists’ shops at Kingston-on-Thames.<sup>102</sup> That same month the LGB urged people, “Do not waste money on drugs in the false hope of preventing infection.”<sup>103</sup> This response should not be considered

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<sup>98</sup>Thompson, 407-408.

<sup>99</sup>C.R. Illingworth, “The Treatment of Influenza,” *The British Medical Journal*, April 26, 1890, 953.

<sup>100</sup>Richard Sisley, “A Study of Influenza; and the Laws of England Concerning Infectious Diseases,” *The British Medical Journal*, January 23, 1892, 168.

<sup>101</sup>*The Times*, November 1, 1918, 7

<sup>102</sup>*Ibid.*, February 19, 1919, 8.

<sup>103</sup>The National Archives, “Specimen Leaflet,” 1919.

an example of panic stricken paranoia. It was entirely rational, considering the advice given at the time. On the first day of November, 1918, *The Times* told readers, “If there is any tendency to sore throat, consult a doctor at once.”<sup>104</sup> Though less publicized, the situation was much the same in the 1890s. In 1891 a religious group in Essex called the Peculiar People even lapsed in their beliefs of not obtaining medical advice by seeking secular healers.<sup>105</sup> If anything, practitioners felt that not enough people were being treated. One doctor even said that people, thinking it was just a cold, did not seek medical advice soon enough.<sup>106</sup> In the context of these circumstances, then, going to the doctors or pharmacies in droves was not strange for the public.

But what about the irrational responses? Suicide may have been one. Historian F.B. Smith’s examination of a random sampling of coroners’ records from 1890-94 shows that around half referred to “influenza” as the primary reason why a victim committed suicide.<sup>107</sup> Smith claims that the flu augmented existing feelings of an individual’s hopelessness: “Influenza had touched most sufferers lightly, but it none the less cast thousands into an indeterminate, threatening situation controlled, it

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<sup>104</sup>*The Times*, November 1, 1918, 7.

<sup>105</sup>*Ibid.*, May 15, 1891, 7.

<sup>106</sup>*Ibid.*, January 10, 1890, 10.

<sup>107</sup>F.B. Smith, “The Russian Influenza in the United Kingdom, 1889-1894,” *Social History of Medicine* vol. 8 (1995), 71.

seemed, by ‘the secret disposition of the atmosphere and the inexplicable sequences of Time’.”<sup>108</sup> But were these people really of sound mind? Smith seems to think so, saying, “In the 1890s kindly coroners glossed the suicides’ testimonies as ‘temporary insanity’, ‘while of unsound mind’, or during 1892-3 especially, ‘from influenza’; but these findings miss the private torments of individuals whose conditions had made them puzzles to themselves and lost them their self-esteem, families, friends, and jobs.”<sup>109</sup> For Smith, these people were compelled by their preexisting mental health conditions or the situation they faced during the pandemic period. Doctors at the time were not so sure. Althaus recorded, “In other cases the mental disturbance assumes more the form of depression and melancholia. The patient refuses food, which he sometimes believes to be poisoned; is in a state of profound apathy, and expresses weariness of life.”<sup>110</sup> Ending one’s life was a possible effect: “There is, however, the risk of the patient committing suicide when in a state of melancholia.”<sup>111</sup> In Derbyshire, doctors recorded that “Delirium occurred in some cases, and was occasionally of a maniacal kind; at times there were delusions, and a few cases ended

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<sup>108</sup>Ibid., 73.

<sup>109</sup>Ibid.

<sup>110</sup>Althaus, 42.

<sup>111</sup>Althaus, 330.

in suicide.”<sup>112</sup> Dr. Frank Nicholson noted that in the past this complication was disregarded, as

I cannot find that insanity, which is a sequel of great importance, has received even a passing notice in the textbooks. I have seen three cases during the recent outbreak, and several others have come under my notice, whilst in the newspapers from time to time a suicide has been recorded following upon an attack of influenza.<sup>113</sup>

The newspapers recorded several cases of shocking events that involved influenza sufferers. In May 1891 a Birmingham man named Edwin Morgan is said to have become delirious, after which he “asked his wife for a razor for the purpose of shaving himself. Unfortunately the woman complied with his request, and, while she was downstairs preparing tea for him, he cut his throat in four places.”<sup>114</sup> In June of the same year, “Mary Ann Charles, 27 years of age, the wife of a wagoner, committed suicide at Somerby, near Grantham, by swallowing a horse ball. The inquest yesterday showed that she became deranged through influenza following close on her confinement.”<sup>115</sup> In Sheffield in 1891 “The nervous depression with or following influenza [occurred] in two instances; one was a servant, who leapt from a window on

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<sup>112</sup>H. Franklin Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 61.

<sup>113</sup>Frank Nicholson, “The Complications and Sequelae of Influenza,” *The British Medical Journal*, June 13, 1891, 1274.

<sup>114</sup>*The Times*, May 13, 1891, 10.

<sup>115</sup>*Ibid.*, June 6, 1891, 9.

the day she was seized with the disorder... The other instance was that of a medical man, who also threw himself out of a high window.”<sup>116</sup> In Birmingham in January 1892, “a man named John Henry Hands, residing in Nechells-park-road, jumped through his bedroom window while in a state of delirium following a severe attack of influenza.”<sup>117</sup> Althaus believed that this issue of influenza producing madness was not new, but was simply receiving more notice in the 1890s: “Although post-grippal psychoses have probably occurred in previous epidemics, proper attention has only been given to them after those visitations which we have recently passed through.”<sup>118</sup> And he argued that it was the special toxin of influenza that caused the effect, even in previously healthy people. “I am utterly opposed to the theory which assigns the determining part in the causation of all post-grippal psychoses to a neurotic predisposition,” he wrote.<sup>119</sup> For the doctors at the time, suicide and other forms of mental health issues were a direct result of the disease. The actions they produced were done by people with a physical, not mental, ailment, who did not know what they were doing.

There were less suicides reported in the newspapers during the 1918-1919 pandemic. In this pandemic the cases were simply reported as if removed from the

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<sup>116</sup>“Influenza,” *The British Medical Journal*, May 30, 1891, 1195.

<sup>117</sup>*The Times*, January 20, 1892, 10.

<sup>118</sup>Althaus, 87.

<sup>119</sup>Althaus, 114-117.

broader pandemic. The *Daily News* reported a murder-suicide on November 6, 1918, of a baker and his family. Without mentioning his mental health, but calling it an “influenza tragedy,” the story recounts how the baker was found “hanging from a line,” while his wife and two children were “found battered to death,” apparently by a “chopper and bayonet.”<sup>120</sup> On the next day there was the story of a woman who committed suicide “by throwing herself into a pit.” She had three ill children, and the newspaper ascribed the act to the “grief at the death of her husband from influenza.” The official inquest found that she was “temporarily insane,” but according to the article she was in recovery from disease.<sup>121</sup> On November 8<sup>th</sup> there was another reported murder-suicide at East Ham. In this instance a man cut the throat of two of his children, and then killed himself. This time the verdict was one of “willful murder,” even though the article reports that “The man was suffering from influenza.”<sup>122</sup> On the 13<sup>th</sup> an article talked about a woman who shot herself three times, and later died. Battersea officials pronounced that the victim had an “unsound mind.”<sup>123</sup> On December 10<sup>th</sup> a Portmadoc gardener attacked his family members with a razor, and though they were not fatally harmed, when the man was pulled away he was able to slit his own throat. The *Daily News* says that he “had been a steady workman, and

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<sup>120</sup>*Daily News*, November 6, 1918, 6.

<sup>121</sup>*Ibid.*, November 7, 1918, 3.

<sup>122</sup>*Ibid.*, November 8, 1918, 3.

<sup>123</sup>*Ibid.*, November 13, 1918, 7.

was a religious man, but had recently suffered from a bad attack of influenza.”<sup>124</sup> On December 20<sup>th</sup> the paper told the story of a woman who was being sent to trial for murdering her baby daughter. She had also tried to kill herself, and the paper said “She was suffering from influenza at the time, and denied any recollection of the deed.”<sup>125</sup> It is difficult to determine which, if any, of these acts were due to the disease, but medical authorities at the time were still uncertain whether the flu led to any mental problems.

Even if the effects of the disease were downplayed in some of the reports from the 1918-19 pandemic, there were still several accounts of people who experienced some type of delirium, whether pleasant or unpleasant, during their bout with the disease. One former sufferer, writing of his experiences in the *Daily News* in 1918, talked about how enjoyable the sensation of being ill could be. Losing sense of time, and mentally reliving scenes from his past, he said, “The symptoms continue to torment the body, but the spirit flies free.”<sup>126</sup> He called these hallucinations a “rejuvenation,” and though it “is the only word I have for influenza,” the author concludes that “it is [worth] much.”<sup>127</sup> In his study of British soldiers in army hospitals in France in 1918, Major C.E. Sundell reported a similar phenomenon. “A common

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<sup>124</sup>Ibid., December 10, 1918, 2.

<sup>125</sup>Ibid., December 20, 1918, 5.

<sup>126</sup>Frederick Niven, “Influenza,” *Daily News*, November 6, 1918, 4.

<sup>127</sup>Ibid.

feature of the illusions,” he wrote, “has been their pleasant nature: many of the severest cases have enjoyed a state of complacency or sense of well-being which was entirely out of keeping with the seriousness of their condition.”<sup>128</sup> A patient may have been hours, or even minutes, away from death, and yet have been completely coherent.

At least one writer was struck by this type of scene, saying,

On the contrary, it has been heart-rending to see heliotrope-cyanosed lusty great men breathing 50 to the minute, and obviously bound to die within a brief hour or two, still clear-headed, able to talk connectedly, not complaining and not obviously in physical distress, yet fully conscious of what is about to happen to them by reason of what they know has happened to their fellows from the same regiment a day or two before.<sup>129</sup>

But there was no uniformity to this symptom. Herbert French gave a similar description, but he felt that what he witnessed was not due to a delirium:

Delirium and coma occurred often enough amongst the bad cases, but far more striking than their occurrence was their entire absence almost to the very end in so many instances. Big strong men, heliotrope blue and breathing 50 to the minute, obviously dying, would be fully conscious, talking rationally on almost any subject, relatively clear-headed to with half-an-hour of death; often not realising in the least how dire their condition was.<sup>130</sup>

In recounting his experiences during the pandemic, one doctor said, “The delirium comes on about the third night, and is not severe at first; the patient can be roused into

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<sup>128</sup>Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 51.

<sup>129</sup>Adolphe Abrahams, Et. Al., “A Further Investigation into Influenzo-Pneumococcal and Influenzo-Streptococcal Septicaemia,” *The Lancet* January 4, 1919, 5.

<sup>130</sup>French, “The Clinical Features of the Influenza Epidemic of 1918-19,” 81.

a lucid interval; but after about 48 hours the delirium is much more severe, and lucid intervals are rarer. Eventually it is of a violent character and there is difficulty in keeping the patients in bed.”<sup>131</sup> One writer explained that this was one of the “outstanding symptoms of the patient whose nervous centres and renal epithelium alike were overwhelmed by the toxins absorbed from his pus-sodden lungs.”<sup>132</sup> But whatever the reason, or whatever the cause, medical practitioners commonly remarked on some sort of mental disorder during this pandemic. If this was downplayed in some of the reports about suicides and murders, it could have been genuinely lacking in those cases. But the flu was an enigma, and often escaped categorization. Some people refused to recognize it as influenza, while others failed to record it as the cause of side-effects like pneumonia. More abstract effects like mental disorders might even have been more prone to irregularities in classification, which means that there is no reason to doubt that these episodes might have truly been caused by the disease, and not by someone acting rationally.

Though the 1890s visitation was presented as more menacing than the latter outbreak, for whatever reason, people seemed to be largely unafraid of the pandemics. In the Local Government Board’s 1891 report, Dr. Parsons did not paint the disease as very threatening when he said it was

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<sup>131</sup>Alexander Edington, “Some Remarks on ‘Spanish Influenza’: Its Nature and Aetiology,” *The Lancet* October 25, 1919, 730.

<sup>132</sup>C.P. Symonds, M.R.C.P., “Nephritis in Relation to the Recent Epidemic of Influenza,” *The Lancet* November 16, 1918, 665.

a disease not indeed very fatal, as an immediate cause of death (though the indirect cause of a considerable mortality), but of importance as occasioning much pain and disablement to the considerable proportion of the community who became its victims, as well as giving rise to much inconvenience in establishments, institutions, and public services of various kinds, owing to the large number of persons often disabled by it at one time.<sup>133</sup>

There was talk of “fear” in *The Times* regarding influenza, but it was in reference to future outbreaks. In February 1919, when the flu appeared again, the author wrote that “our fears have been justified.”<sup>134</sup> Similarly, in September of the same year an article carried the statement, “The fear of a recrudescence this winter is universal.”<sup>135</sup> These both may be instances of media sensationalism, but one cannot be certain. What is important to note, though, is that both of these statements refer to anticipated outbreaks, and not about the sights and sounds around them during the events. In other words, they were not afraid of what was happening (the concrete), but what might happen (the unknown). People may not have been allowed to become frightened at the disease during its appearances, due to the supposed ill effects on one’s health, but after it was over they had the opportunity to look back and assess what another outbreak would do.

Present day writers would like us to believe that the 1918-19 pandemic, with its unprecedented loss of life, was more important to people at the time. But with the

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<sup>133</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 1.

<sup>134</sup>*The Times*, February 14, 1919, 5.

<sup>135</sup>*Ibid.*, September 25, 1919, 7.

exception of the keenest observers, most people did not realize what they were living through. Statements about this being the most devastating pandemic in human history were not found in the newspapers of 1918, even though the disease caused the highest loss of life in October and November of that year. And it was not a lack of coverage that detracted from this impact, for the newspapers did their duty of keeping pace with the amount of coverage during the previous pandemic. Taking the Monday through Saturday *London Times* as an example, articles concerning the influenza pandemics stayed in relatively the same place, on page five. The first two pages of this paper consisted of announcements, such as obituaries and advertisements, while the main stories began on page three. Some flu articles appeared on page three in almost every month that it was covered from 1889-1895 and 1918-1919, but only in July 1918 were there more articles on page three than any other page of the newspaper. Instead, page five was consistently the source for domestic information on the influenza “epidemics,” as they were called (though sometimes this was outpaced by foreign news articles, which were most often found on page seven). Any reader familiar with the paper would know where to find them. They were not hidden, but they certainly were not front page headlines.

Historian Alfred Crosby argues that because the 1918-19 pandemic killed more young people, and thus less famous people, its notoriety was lessened.<sup>136</sup> Crosby’s

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<sup>136</sup>Alfred W. Crosby, Jr., *Epidemic and Peace, 1918* (Westport, CT: Greenwood Press, 1976), 322.

book concerns the United States, so it remains to be seen whether this factor was important to people in Britain. A more likely explanation, for Britons at least, was that the war trivialized the disease. Despite its massive worldwide impact, the effects of the influenza pandemic of 1918-19 did not compare to what had been witnessed in the war. Writing his report for the MOH in 1920, Herbert French said, “The only other condition in which I have seen similar facies with cyanosis has been ‘gassing’; but in gassed cases the patient has been in dire distress as well, whereas the influenzal ‘pneumonic’ cases were in much less distress than were those who saw them.”<sup>137</sup> Lay writers might make similar comparisons. After the devastating second wave of the autumn of 1918, a writer in *The Times* stated, “It remains to consider in what manner we may prepare to meet future epidemics of this and other plagues, and so save ourselves and the world from horrors which, if not as vivid as those of war, are quite as destructive to life and property.”<sup>138</sup> Most of those who read this quote had not seen the front lines, the mass slaughter; bodies ripped apart by artillery, droves mowed down by machine gun fire, and soldiers suffocated by gas attacks. They had probably not seen, nor were they able to read the as yet unpublished memoirs that described “a number of men yellow-faced and choking, their buttons tarnished green – [these were]

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<sup>137</sup>Herbert French, “The Clinical Features of the Influenza Epidemic of 1918-19”, in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 74.

<sup>138</sup>*The Times*, December 24, 1918, 3.

gas cases.”<sup>139</sup> However, the newspaper writer still said the images of the war were more “vivid” than those of the pandemic. Two reasons might explain this. The war was ever present. It monopolized the first pages of the newspapers, where the casualty lists and news from the front filled the columns. And if these stories were embellished, all the better for making a case that the war was bigger in the minds of the people. In *The Times*, of seventeen influenza articles that appeared in June and July, 64% were on page three. But in the peak months of October and November, when ninety-three articles concerning the epidemic appeared in the paper, less than 25% were found on page three. In the last month of the war, and during the immediate period following the armistice, the war reasserted its importance. Perception mattered more than fact, and facts concerning the flu pandemics were much more accessible (through observation in daily life) than facts concerning the war. Both the war and the flu killed, but despite doctors’ and writers’ fears, very few people complained of long term effects of the disease. The war mangled. Those who experienced, or thought they were suffering, from the after-effects of influenza only showed internal symptoms. Compare this to smallpox, for instance, which left visible scars. And for some, at least, the war wasn’t that far from home. There were the men who faced humiliation, with the posters that enjoined them to enlist, or the anxiety over being drafted. And for those who stayed home, the realities of the front line might not be that far away, either. They may have a loved one at the front, or, “If

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<sup>139</sup>Graves, 151.

wind and humidity were right, the sound [of artillery] could be heard in London from the furthest part of the British front.”<sup>140</sup> Information about the war was available, but the flu was ubiquitous. If it had made more of an impact than the war, it would have dominated people’s minds, the press, the government, and many other areas of life. But it did not. The Great War dominated.

Another idea at work in the popular minds and press was that the pandemic was either directly linked to the war, or that it was ‘of the times’. In other words, the outbreak was seen in conjunction with the war in some way or another, with the war being either directly responsible for the event or with the pandemic being just another event in the crisis the people were trudging through. Some writers were direct in the link. “It is, very probably, one more of the dire offerings of the war to us,” said a newspaper contributor.<sup>141</sup> Another article theorized that “Possibly there is some relation between the vulnerability of the population and the mental wear and tear of the war.”<sup>142</sup> The first real article to appear in *The Times* about the pandemic that began in 1918 said,

There can be no doubt whatever that [influenza] has been recurring in a very severe form in Germany, Austria, and the territories occupied by the Central Powers during the last two years. Malnutrition and the general weakening of nerve-power known as war-weariness provide the necessary conditions for an epidemic, and contact between national armies, which

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<sup>140</sup>Denis Winter, *Death’s Men* (New York: Penguin Putnam Inc., 1979), 175.

<sup>141</sup>Niven, 4.

<sup>142</sup>*The Spectator*, November 2, 1918, 475.

tends to make diseases international, is another factor favourable to propagation.<sup>143</sup>

One writer speculated that the breeding grounds for the germ were the rotting corpses on the European battlefields.<sup>144</sup> There were other reasons why the war could cause the disease, as another explained, “The war has, however, fundamentally changed the general character of European traffic.”<sup>145</sup> Even those articles that denied war to be *the*, or even *a*, cause of the disease still suggested that it created a specific environment for it, saying such things as, “Taking the people of this country as an instance, it may be said that collectively they are less fitted, both in condition and environment, to resist epidemic disease than they were a few years ago.”<sup>146</sup> One doctor wrote, “After four years of intense anxiety and worry, of unexampled hard work for most of those left at home, of shortage of most of the foods on which we principally depended, of the depression and gloom engendered by dark streets, and the scanty recreation and holidays, it is small wonder that any epidemic should take hold and spread like wildfire.”<sup>147</sup> An ad for Shadforth Prescription Service also propagated this common belief, stating, “After four years of war every person is suffering from

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<sup>143</sup>*The Times*, June 25, 1918, 9.

<sup>144</sup>*Daily News*, October 24, 1918, 4.

<sup>145</sup>*The Times*, October 14, 1918, 5.

<sup>146</sup>*Ibid.*, October 28, 1918, 7.

<sup>147</sup>Dr. Ethel Bentham, “No Need For Panic; Effects of War Strain and Unusual Foods,” *Daily News*, October 31, 1918, 5.

some aching anxiety, and this is a strain upon the nerves. When our morale is low the nervous system is low and resisting power is low and thus a mild cold eventually turns to serious disease.”<sup>148</sup> These ideas were not just found in the popular press. An article in the medical journal *The Lancet* said, “It has to be borne in mind that the conditions of living are just now abnormal. The people are suffering from an unusual strain, both mental and physical.”<sup>149</sup> The primary British government report, published by the Ministry of Health in 1920 and amassing more than four hundred pages of information from around the world, denied that disease was felt more in belligerent countries than neutral ones.<sup>150</sup> But it did have this to say:

if anywhere in the world there be large collections of men, whether through war or economic strife, or through that dissolution of civil society, which a certain degree of collective misery and disorganisation entails, herded together *en masse*, there will be opportunities for the other modifications of the *materies morbi* which renders it apt to conquer the world.<sup>151</sup>

Influenza even took a sideline to the potential diseases that loomed after the war had ended. In a November 27, 1918 review of *Epidemics Resulting from Wars* by Dr. Friedrich Prinzing, the reviewer said “Unless influenza and trench fever may be counted, the present war would seem on the whole to have been free from any such

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<sup>148</sup>*Daily News*, November 26, 1918, 9.

<sup>149</sup>“The Influenza Epidemic,” *The Lancet*, November 2, 1918, 595

<sup>150</sup>*Report on the Pandemic of Influenza 1918-19*, 54, 188.

<sup>151</sup>*Ibid.*, 192.

pandemic.”<sup>152</sup> This was written several weeks into the second, and most deadly, wave of the pandemic. He goes on to caution that, “We are not out of the wood. Our author points out the danger to which the inhabitants of a country are exposed when the soldiers return home from an infected country.”<sup>153</sup> Influenza, then, was not recognized as a serious pandemic. There were other similar articles that warned about the possible threats of infection from demobilized soldiers. The most pressing seemed to be tuberculosis, which continued to compete for column space with influenza into the third wave of the pandemic in 1919.

The historical significance placed on the flu pandemic of 1918-19 might make modern readers believe that this was the most urgent issue of the time, but in fact other diseases were rightly more of a concern. Taking the Registrar General’s figures for causes of death in England and Wales, what one finds is that in the period 1890-1917 during years influenza *was not epidemic* pneumonia killed an average of 38,496 people each year, while bronchitis killed 41,314, on average. In that same set of years, when influenza *was epidemic* it killed an average of 10,177 people each year, while the peak year of this period, 1891, deaths numbered 16,686.<sup>154</sup> It should be apparent why these other respiratory afflictions were the primary concerns. Pneumonia and

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<sup>152</sup>*Daily News*, November 27, 1918, 10.

<sup>153</sup>*Ibid.*

<sup>154</sup>*Report on the Pandemic of Influenza 1918-19*. 31-34 and “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 2.

bronchitis were consistent killers; influenza was not. What about the connection between these diseases? Contemporaries were already arguing that pneumonia and bronchitis might develop as complications of influenza. In 1890, Dr. P.Z. Herbert stated that “The prevalent opinion seems to be that influenza is the cause of the diseases of the respiratory organs which accompany an epidemic of it.”<sup>155</sup> However, the figures show that given the averages in years of influenza epidemics, pneumonia only showed an increase of 8,659 deaths, an increment of roughly 22%, and deaths due to bronchitis only increased by 8,987 deaths, which was under 22%.<sup>156</sup> Influenza did not significantly increase the deaths due to either of these causes. Their mortality rates were already substantial, and they remained so. And pneumonia and bronchitis were not perceived as being a complication solely of the flu. In 1918 Arthur Newsholme wrote, “These diseases hasten the death of tuberculosis patients; and a large proportion of the deaths registered as due to Measles, numbering 10,644 in 1913, and 16,445 in 1915; and from Whooping Cough, numbering 5,488 in 1913 and 8,143 in 1915, are caused by infections secondary to Measles, which produce bronchitis and pneumonia.”<sup>157</sup> What they saw as the real threats had been present uninterruptedly for years.

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<sup>155</sup>P.Z. Herbert, “The Respiratory Complications of Influenza,” *The British Medical Journal* February 22, 1890, 419.

<sup>156</sup>*Report on the Pandemic of Influenza 1918-19*. 31-34.

<sup>157</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 1.

The 1918-1919 pandemic was an opportunity for everyone to reevaluate what they could do to better the health of the nation. In 1920, when the MOH published its report on the pandemic, it continued to present this view.

Not that a plague is the arbitrary stroke of some supernatural power, but that it is the inevitable reaction of human society to a disturbance of social hygiene and is, therefore, ultimately within our great control, not through the utilisation of specifics but by an harmonious adjustment of living between the members of all the human family.<sup>158</sup>

This was not a defeatist message, but rather an overly optimistic one that encouraged, or rather required, everyone to do their part. What was left was to see whether the people would do this, and history showed once before that they had not. In 1892 *The Times* similarly stated, “At the present time every fresh case of influenza is directly due to some previous case. Until the general public has assimilated this truth, there will be difficulty in persuading them to take precautions to avoid its spread.”<sup>159</sup> That same month *The British Medical Journal* carried this thought:

The whole of the English-speaking people, nay, the whole world, has within the last few days been most feelingly persuaded of the present power of influenza. A prince of great<sup>160</sup> though quiet promise has fallen in our midst, and a great churchman has been taken from his long but not yet finished work. These events have excited a profound interest, and, with the private and personal losses which are felt on every hand, have sufficed to concentrate an unprecedented attention on the subject of epidemic influenza. Panic on such occasions as this among the general public and their teachers frequently alternates with apathy. But if the

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<sup>158</sup>*Report on the Pandemic of Influenza 1918-19.*, 196.

<sup>159</sup>*The Times*, January 25, 1892, 4.

<sup>160</sup>Prince Albert Victor, Duke of Clarence.

panic, which has undoubtedly arisen, can be turned to a useful and healthy purpose, the great sufferings the nation has undergone will not have been in vain.<sup>161</sup>

In 1893 Dr. Parsons wrote, “The recognition of Influenza as a serious disease of an infectious nature will, it is to be hoped, lead to its being reckoned in public estimation as a disease of which it is worth while to take some pains to prevent the spread.”<sup>162</sup> For whatever reason (and there were different reasons in different outbreaks), influenza did not make a strong impact on the public.

During an epidemic there was no time to reflect. Medical practitioners were constantly busy, and other observers were not armed with the statistics necessary to make claims, or be shocked, by the disease. Parsons demonstrated this in 1893. Looking back on the 1890 epidemic, using the Registrar General’s statistics that were then available, he was surprised that previous assumptions had been incorrect. He wrote,

the highest rates of mortality from Influenza were by no means in the parts of England in which, according to our previous information, its prevalence had seemed to be greatest, viz., in the east of England and the neighbourhood of London; but on the contrary its greatest proportional fatality was in the southern and south midland agricultural counties of England, and in the hilly regions near the west coast. It was not greatest in the most unhealthy parts of the country.<sup>163</sup>

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<sup>161</sup>“Concerning Influenza,” *The British Medical Journal*, January 23, 1892, 183.

<sup>162</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 81.

<sup>163</sup>*Ibid.*, 4.

For most people epidemics were felt on an individual, or at most, a family level. An article in *The Spectator* presented the impression that individuals did not worry about the disease: “He expects bed, and it may be suffering, but not a sentence.” They were concerned about others, though, but “it is sympathy, not terror, which has been so passionately aroused.”<sup>164</sup>

The pandemic that hit Britain from 1889-92 had no simultaneous catastrophe to be compared to, which strengthened its impact. But this was still not the type of response that most writers at the time depicted when speaking of influenza pandemics. There were some episodes of alarm, but for the most part people were calm. In 1892 one writer claimed, “Our people, no doubt, whether it be from stolidity, or from an undercurrent of fatalistic feeling, or from a deep though unspoken reliance on the goodness of Providence, are singularly, almost unintelligibly free from liability to panic produced by a general visitation of the disease.”<sup>165</sup> The Great War and its accompaniment of diseases muted the effect of the pandemic that struck in 1918-1919 even more than that of the 1890s, regardless of its higher body count. Wrapped up in these and other issues, people were unable to step back and pause to evaluate the event. Further, neither they nor anyone else had the full use of comprehensive statistics to detail its dramatic nature. It struck in quick succession, and when there was finally time to compile statistics, the visitations were over. In the 1890s and the

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<sup>164</sup>“The Moral Effect of the Epidemic,” *The Spectator*, January 23, 1892, 115.

<sup>165</sup>Ibid.

late 1910s people went about their lives. Most were concerned at some level, but there were others who thought that the disease was not important at all. On October 31<sup>st</sup>, 1918, after the second and deadliest wave had been afflicting the country for weeks, one doctor wrote, “The present epidemic does not seem a very important disease in itself, for with proper care and conditions 95 per cent. of the cases are trivial.”<sup>166</sup> We may regard this as the deadliest plague in human history, and while there were some newspaper pronouncements that flirted with this idea, at the time most people did not fully grasp the weight of this event.

In a recent article about the 1918-19 pandemic Andrea Tanner stated, “The pandemic, in London, as elsewhere in Britain, was a burden to be quietly borne for the sake of the future of the nation.”<sup>167</sup> This statement is misleading. The disease was a burden, but only a mild one. However, the English people did not toil through it because they were forced to. Instead, it was rarely cumbersome. This was especially true in 1918, when the inconveniences it presented had to contend with the war. Most of the public fell ill for a few days, then returned to life as normal. At some level people were probably worried about catching the flu, but it did not stop their regular activities. In the summer of 1918 the *Manchester Guardian* wrote, “‘The influenza’ is an excuse or an explanation one meets at every turn. The tram service is curtailed, and

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<sup>166</sup>Bentham, 5.

<sup>167</sup>Andrea Tanner, “The Spanish Lady Comes to London: the Influenza Pandemic 1918-1919,” *London Journal* 27, no. 2 (2002), 69.

the parcels system disorganised. Telephone calls are harder to put through; letters are delayed. In cafes one waits longer for meals.”<sup>168</sup> The article was titled “The Influenza Grip. Minor Social Effects.” It shows that people were still riding on the trams and going to cafes. And on Armistice Day, 1918, “omnibuses and vehicles of every kind were crowded to the danger-point, and the main streets became a sea of cheering folk.”<sup>169</sup> This illustrates that the people were not terrified of the disease; avoiding crowds was one of the most oft-repeated messages about the spread of influenza. It also demonstrates how much the war overshadowed the pandemic. According to a contemporary report, “the signing of the armistice was the end of a silently-borne anxiety about loved ones at the front.”<sup>170</sup> Like the couple who chose to share a cab with the influenza-stricken Robert Graves, most people in England were unmoved by the flu.

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<sup>168</sup>“The Influenza Grip. Minor Social Effects,” *Manchester Guardian*, July 4, 1918, 8.

<sup>169</sup>“Notes of the Day,” *Westminster Gazette*, November 11, 1918, 2.

<sup>170</sup>*Ibid.*

## Chapter V – The Medical Response

From 1889 to 1919 influenza presented challenges to society at large, with the medical community at the forefront of the struggle. Often overworked and underpaid, this group was burdened with a series of duties, including treating an unprecedented number of patients, keeping logs and filing reports, and speculating about all manner of items related to the disease. To a certain extent these tasks were intertwined, but in the grip of an epidemic or pandemic the sheer numbers made work daunting. Yet they weathered the events.

In the mythology currently propagated by recent books on influenza the 1918-1919 pandemic is said to deserve more respect, its menacing qualities supposedly outweighing those of previous pandemics. But in the pandemic that began in 1889, symptoms were serious, and often similar to those experienced in 1918 and 1919, especially in the beginning of the late 19<sup>th</sup> century pandemic. E. Symes Thompson remarked that

In a number of recorded instances a violent attack of pain has been the first intimation, so severe sometimes as to cause the person to fall down under the impression that he has been struck. In others, wild transient delirium has ushered in the symptoms... However the malady commences, within a few hours the patients are unable to be still on account of the aching, and unwilling to move on account of the pain. The prostration becomes very intense, and the patient manifests indifference to his

surroundings and is wrapped up, so to speak, in the contemplation of his own misery.<sup>1</sup>

The same respiratory problems that characterized the 1918-1919 outbreak could also be found, as “Even in mild cases in which auscultatory signs were absent, urgent dyspnoea of an asthmatic character with cyanosis has been remarked.”<sup>2</sup> Dr. W.M. Ord wrote,

In some cases I have also observed a phenomenon indicating, as it appears to me, serious affection of the central nervous system. A patient is blue and livid, mostly with turgid cheeks; he is breathing fast and with a distinct rattle, audible at some distance. On auscultation there are signs of the presence of large quantities of secretion in his bronchial tubes. Yet there is no expectoration, and no sign of the swallowing of secretion.<sup>3</sup>

Influenza in the late 19<sup>th</sup> century was just as dreadful as that of the early 20<sup>th</sup> century.

Dr. William Wylie described the disease as

a most formidable and complicated disorder. It attacks strong and robust adults, and healthy children of both sexes. Rich and poor suffer alike. People whose hygienic surroundings are as perfect as possible are attacked equally with those who are careless in such matters. Moreover, they who take the utmost care to protect themselves from the infection frequently fall victims, rather than they who are in the closest proximity to the infected.<sup>4</sup>

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<sup>1</sup>E. Symes Thompson, *Influenza or Epidemic Catarrhal Fever: An Historical Survey of Past Epidemics in Great Britain from 1510 to 1890* (London: Percival and CO., 1890), 400.

<sup>2</sup>*Ibid.*, 401.

<sup>3</sup>“The Influenza Epidemic,” *The British Medical Journal*, January 30, 1892, 244.

<sup>4</sup>William Wylie, “The Influenza Epidemic of 1833,” *The British Medical Journal*, January 30, 1892, 250.

Some bemoaned the seemingly pervasive nature of the disease. A writer in *The Spectator* said, “There is no flying from the attack, for it appears everywhere, in all countries, and on all continents, besides raging occasionally on board ship; and no means of avoiding it, for no one knows in the least to what circumstance an attack is due.”<sup>5</sup> Despite the respect given in hindsight, other pandemics evoked similar concern amongst those living through them.

Current authors have also attempted to convince readers that what shocked the world in 1918 and 1919 was that the mortality rates for the flu in those years was turned upside down, with young adults dying at a higher rate than those of advanced age. Writing in 1998, Christopher W. Potter said, “Deaths were mainly seen in the 20-40-year age group, and this is distinct from the experience of all other recorded influenza pandemics.”<sup>6</sup> Contemporaries of the 1918-1919 pandemic believed in the uniqueness of this experience, too. In 1918 Dr. L. Rajkmann commented, “The peculiar fact that young and robust men are particularly susceptible and non-resistant calls for a special elucidation, as well as the severity of the secondary epidemic.”<sup>7</sup> But “young” is a vague term, and could include a large set of years. So what is meant by the word “young.” In 1919 a LGB memorandum said this: “Young adults have been

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<sup>5</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>6</sup>Christopher W. Potter, “Chronicle of Influenza Pandemics,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 3.

<sup>7</sup>The National Archives, “‘The pathology of Influenza’ by Dr. Rajkmann,” (London, England: FD5/186, 1918), 1.

specially affected by this epidemic, not only in this country, but also in France and America. The largest proportion of deaths has occurred in persons under 45 years of age.”<sup>8</sup> And in 1920, George Newman, Chief Medical Officer, wrote in the Ministry of Health’s report that “On the clinical side the outbreak was remarkable, not for its virulence or mortality, both of which were low, but for its complete change of age incidence. It attacked youth.”<sup>9</sup> Herbert French wrote, “one formed the impression that the incidence of the disease – unlike that of 1890-91 – was considerably greater in those between the ages of 20 and 50 than in those below this age period, in addition to which it was people of these ages who were mostly aggregated together in camps and barracks.”<sup>10</sup> Regardless of how one defines it, though, these observers, both current and those in the past, were wrong. This perception of a younger age incidence was not anything new – for Britain, at least. When the pandemic that began in 1889 struck, initially it was the young people who were thought to be more severely

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<sup>8</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA,” 1919 (London, England: MH 10/84), 1.

<sup>9</sup>George Newman, “Chief Medical Officer’s Introduction,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), viii.

<sup>10</sup>Herbert French, “The Clinical Features of the Influenza Epidemic of 1918-19”, in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 90.

affected. Parsons clearly stated that “No age is exempt from Influenza.”<sup>11</sup> When *The British Medical Journal* published the first death rate returns for London in mid-January, 1890, the results were that of a total of sixty-seven, twenty-four fell between the ages of twenty and forty, twenty-eight between the ages of forty and sixty, and only eleven came from those above sixty.<sup>12</sup> The following week’s returns presented a similar picture, with thirty-four deaths between the ages of twenty and forty, forty-six between the ages of forty and sixty, and only twenty-seven in those above sixty.<sup>13</sup> In Manchester in 1890, of 45 total deaths due to the disease, 31, or almost 69%, fell between the ages of 25 and 60.<sup>14</sup> Thompson wrote that “Complications were most frequent in persons between the ages of 30 and 40, and rather more in males than females.”<sup>15</sup> Though downplaying the total effect of the epidemic, Thompson made yet another statement in regard to the age incidence:

Although the above high death-rates have been surpassed during non-epidemic times in London, under exceptionally unfavourable climatic conditions... it must be noted that the mortality was then chiefly among

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<sup>11</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 67.

<sup>12</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 18, 1890, 146.

<sup>13</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 25, 1890, 202.

<sup>14</sup>Dr. Tatham, “Memorandum on Influenza Prevalence in Manchester,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 283.

<sup>15</sup>E. Symes Thompson, 406.

the very young and the old, and not, as during the recent epidemic, between the ages of 20 and 60, the increase being 70 per cent between the ages of 20 and 40, and 93 per cent between 40 and 60.<sup>16</sup>

When the flu reappeared in late 1891, the Edinburgh correspondent for *The British Medical Journal* stated that “The victims of the infection have been persons chiefly between the ages of 40 and 60 years, but older persons have also been attacked.”<sup>17</sup> In 1891 Dr. Parsons noted,

A circumstance which seems to point to a difference between the epidemic influenza and what goes by the name of influenza in non-epidemic years is the difference in the incidence of the mortality on persons of different ages; the deaths ascribed to ‘influenza’ in ordinary years being chiefly those of young infants and of elderly persons, whereas the deaths during epidemics are more numerous in proportion to the whole at the middle periods of life.<sup>18</sup>

He spelled out what he meant by “middle periods of life” in the 1891 LBG report – “viz. between 20 and 40 and between 40 and 60.”<sup>19</sup> At the Asylum for Imbeciles and School for Imbecile Children in Darenth “The class of patients most attacked were those between 20 and 35 years old.”<sup>20</sup> Even in 1892, Althaus stated that the chances of recovering from an attack were much better for children: “There is always hope for

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<sup>16</sup>Ibid., 411.

<sup>17</sup>“The Epidemic of Influenza,” *The British Medical Journal*, December 5, 1891, 1231.

<sup>18</sup>H. Franklin Parsons, “The Influenza Epidemics of 1889-90 and 1891, and Their Distribution in England and Wales,” *The British Medical Journal*, August 8, 1891, 304.

<sup>19</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 6.

<sup>20</sup>Ibid., 211.

them where there is no longer any hope for adults or the aged. Above the age of twenty years the prognosis is in general not so good in grip as below that age.”<sup>21</sup> By virtually any standard existing in the 19<sup>th</sup> or 20<sup>th</sup> centuries the age of twenty was not categorized as being of advanced years.

The reality is that in the 1890s the elderly died at a higher rate and those younger at a much lower rate than in 1918, but this is a statement that needs to be qualified. In sheer numbers the amount of deaths in the category “65 and over” were higher in every year of the earlier pandemic. However, this category contains a wide range of ages – reasonably thirty or more years. So which years do we combine at the lower end of the scale? Would we group together 20 to 45? This would yield a lower number of deaths for each of these years. But grouping together 35 to 65 would produce a higher number of deaths in 1890 and 1891, but not 1892 (though only by about 6% less). Grouping together 25 to 55 would produce a higher count for 1890, but not the other years.<sup>22</sup> What seems to have shocked people in 1918 was the percentage of the population at these different ages that were dying. As a percentage of total influenza deaths, the age group “15-35” accounted for 42.6% of the deaths from June 23<sup>rd</sup> to September 30<sup>th</sup>, 1918, and 46.5% of the deaths from October 1 to

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<sup>21</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> Edition, (London: Longmans & Co., 1892), 329.

<sup>22</sup>Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 31-34.

December 31, 1918. The age groups “35-55” accounted for 21.3% and 17.2%, while those above fifty-five had 17.3% and 10.5% in the two periods, respectively.<sup>23</sup>

Observers in the 1890s were not completely misguided. Published statistics were released a year after the fact, so people were forced to rely on their experiences to assess the situation at hand, and experiences varied. What is important is that in 1890, and even 1891, perhaps even 1892 for some, there was still the perception that the disease was different because it attacked a younger age group. And it was this perception that shaped attitudes towards the pandemic for contemporaries. Later generations might have the numbers, but in the heat of the outbreak this is a luxury that was not available.

Current authors also state that the 1918-1919 pandemic was more disturbing because the healthy young were struck down in their prime. But in 1891 Parsons knew that “Vigorous health... did not prevent persons from contracting Influenza, nor from suffering severely from it if they got it.”<sup>24</sup> *The Spectator* said, “Men apparently in full health are struck by it without warning, so that an omnibus-driver suddenly drops his reins and is only held by passengers on the box, and that a professional man driving to his office stops his hansom, drives back, and is taken out of the cab in full

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<sup>23</sup>Great Britain, *Report on the Mortality from Influenza in England and Wales During the Epidemic of 1918-19: Supplement to the Eighty-First Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales* (London: H.M. Stationery Office, 1920), 8.

<sup>24</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 67.

delirium.”<sup>25</sup> Like the epidemics that occurred in 1918 and 1919, the age incidence changed as the pandemic progressed chronologically. In 1919, when the third wave hit, the elderly were affected more. They recorded this same phenomenon in the previous pandemic. In 1892, the higher death rate “receives an explanation when it is remembered that the death-rate from Influenza increases with advancing age, and that whilst so many of our rural areas have been more or less denuded of young people and adolescents, the old people have remained at home in their village.”<sup>26</sup> In January 1892 a writer in *The Spectator* said, “the disease betrays a distinct malignity towards the old, who, in the modern system of society, are those who are the most important, and therefore the most missed.”<sup>27</sup> So both pandemics started with the “young,” but as they proceeded the elderly were more affected.

This earlier outbreak had its own peculiarities for people to grapple with. In 1893, Parsons recorded that in 1890, influenza killed more men than women, when “In all previous recorded years, however, whether epidemic or otherwise, the deaths from ‘Influenza’ have been more numerous among females than among males.”<sup>28</sup> Of

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<sup>25</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>26</sup>R. Thorne Thorne, “Introduction by the Medical Officer,” in *Further Report and Papers on Epidemic Influenza, 1889-92*, London: Her Majesty’s Stationary Office, 1893, viii.

<sup>27</sup>“The Influenza,” *The Spectator*, January 16, 1892, 81.

<sup>28</sup>H. Franklin Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 2.

course, they came up with an explanation for this abnormality. Parsons explained that the reversal “may not improbably be connected with the influence of the fatigue and exposure incidental to men’s vocations.”<sup>29</sup> And while this may not completely satisfy (surely fatigue was an operating condition during non epidemic years), it shows that there was a perceived uniqueness to the earlier pandemic, too.

A diverse group of nurses, doctors, and researchers contributed to the situation they unexpectedly found themselves in. While not everyone participated in the same endeavors, they were all committed to the same end – that of managing the disease. But given the lack of knowledge about the disease, combined with established misconceptions, many found themselves frantically experimenting with different treatments. And while everyone had their own favorite that they claimed was the most effective, there was not an unanimously recommended action for medical practitioners to take. Despite this, they still acted as though they might alleviate and overcome the disease, failing to concede in an atmosphere of overwhelming adversity. There was no time to stop and collect scientific data. In a sense the whole country became a large experiment about pandemic influenza.

With the limitations they faced, treatment became a guessing game, and they were no closer to finding the answer in 1918 or 1919 than they were in the 1890s (or than we are now, for that matter). Because, as E. Symes Thompson wrote, “There is a grandeur in its constancy and immutability superior to the influence of national

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<sup>29</sup>Ibid.

habits,” people now had to devise ways of dealing with a disease that had and would indiscriminately strike a large proportion of the population.<sup>30</sup> Some practitioners chose to apply their previous experience with the disease before witnessing fresh cases. Dr. Horace Dobell had lived through the pandemic of 1847-48, and with this knowledge he suggested, in December 1889, “it is of the utmost importance to have ready a ‘cut and dried’ routine plan of treatment carefully designed for general use, which can be put in force at once.”<sup>31</sup> One of the main items used as a treatment was quinine. Antipyrine was another popular drug. Both had shown some success in the alleviation of fevers, and at the time influenza was similarly classified in this category of diseases. Physician William Boultong wrote, “I have used antipyrin in doses varying from 10 to 20 grains every four hours... without any evil results.”<sup>32</sup> It was also generally recommended to go home and rest, and to keep warm. Even before the flu was commonly acknowledged to have reached England in 1889, *The British Medical Journal* published a treatment practiced by a “medical man” in Paris, who had already recovered from the disease. This source “recommends taking large doses of sulphate of quinine as soon as the first symptom shows itself, to eat and drink well, and take a great deal of exercise in the open, in order to burn off and eliminate by physiological

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<sup>30</sup>E. Symes Thompson, vii-viii.

<sup>31</sup>Horace Dobell, “The Epidemic of Influenza,” *The British Medical Journal*, December 21, 1889, 1419.

<sup>32</sup>William Boultong, “The Incubation Period of Influenza,” *The British Medical Journal*, July 25, 1891, 190.

function the noxious principle that works the mischief.” The article claimed that “this *traitement rationnel* has succeeded in several instances.”<sup>33</sup> When the first wave hit in the summer of 1918, one doctor prescribed cinnamon oil and quinine to patients.<sup>34</sup> This happened even though practitioners had questioned the value of quinine in the late 19<sup>th</sup> century, while some were wholeheartedly against it. Althaus, for one, wrote, “there does not appear to be any scientific reason why we should counsel the use of that drug, more especially as experience has proved it to be devoid of value.”<sup>35</sup> But aside from the traditional medicinals or the ‘common sense’ advice, a number of other suggestions also appeared.

A variety of questionable products were advertised as influenza curatives in both pandemics. An 1892 advertisement for The Burroughs, Wellcome & Co.’s Salicin ‘Tabloids’ included a lengthy reproduction of an article from the *Daily Telegraph* quoting one Dr. T.J. Maclagan on why this type of item would be effective: **“Salicin in full and frequent doses cures Influenza more rapidly than does any other mode of treatment.”**<sup>36</sup> Another advertised remedy was “Langdale’s Concentrated Medicinal Essence of Cinnamon.” According to its pamphlet length

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<sup>33</sup>*The British Medical Journal*, December 21, 1889, 1415.

<sup>34</sup>“Sudden but brief attacks,” *The Times*, July 2, 1918, 3.

<sup>35</sup>Althaus, 333.

<sup>36</sup>Wellcome Library, “Influenza (Salicin for)” (London, England: WF/M/GB/01/02, 1895-6). [Original emphasis].

advertisement, “It was not, however, till recently that it was discovered in the laboratory of M. Pasteur, the eminent Chemist and Specialist of Paris, to have the power of absolutely destroying all DISEASE GERMS, and to KILL the MICROBE or Disease Germ of Influenza.”<sup>37</sup> A patient who had contracted the flu was to take [the tedious prescription of] 20 drops of the product every three hours. One might surmise that the discipline required to fulfill this treatment would prove an effective explanation by the product’s manufacturers if it failed in the claims that were made. The proliferation of these types of products did not end when the worst had passed in the 1890s. In November 1894 John Wallace was granted a patent for his influenza curative, which was to be taken three times each day in doses of ten to twenty drops. It was noted as a cure for the flu, even though the application does not specifically mention the disease.<sup>38</sup> And in 1895 a French remedy called Elixir Godineau was advertised as a product that would restore the body’s strength and thus give it the power to fight the flu.<sup>39</sup>

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<sup>37</sup>Wellcome Library, E.F. Langdale, “Influenza : the finest remedy: Langdale's concentrated medicinal essence of cinnamon. Specially recommended for children,” (London, England: QV 26.BE5 1892 L27,between 1892 and 1899?), 8.

<sup>38</sup>John Wallace, “A new medicine for the cure of influenza and other complaints,” (London: Printed for Her Majesty's Stationery Office by Darling and Son, Ltd, 1894).

<sup>39</sup>Wellcome Library, “Elixir Godineau,” (London, England: QV 26 1895 E42e, 1895), 45.

The public and even some practitioners may have been duped by these so-called “cures,” but many doctors chose to recommend their own remedies. Dr. Bernard O’Connor, of London, prescribed “Powdered periodate crystals (Weaver’s), forcibly blown into the nostrils.”<sup>40</sup> Another man disagreed with this remedy, and instead suggested “Condy’s fluid”(permanganate of potash).<sup>41</sup> Another doctor, unconvinced of the usefulness of antipyretics, wrote, “Those who remember anything of the epidemic of 1847-48 (which, from special associations, I saw treated) will recall the fact that diffusible stimulants such as camphor and ammonia succeeded when ‘antiphlogistics’ failed, or did harm.”<sup>42</sup> It seemed that every doctor touted their favorite remedy as the best one for the job. Surgeon Niell MacGillycuddy of Bournemouth recommended phenacetic (a fever and pain reducer), saying that “In influenza it is the nearest thing to a specific we have yet discovered.” He further criticized his fellow practitioners by stating, “It is difficult to understand why, in these days of new remedies, the attention of the profession has not been more drawn to it, especially in view of the many dangers that attend the use of antipyrin.”<sup>43</sup> Dr. William Robertson of Newcastle-on-Tyne recommended the use of benzol as an internal

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<sup>40</sup>Dr. Bernard O’Connor, “Influenza,” *The British Medical Journal*, December 21, 1889, 1431.

<sup>41</sup>Mr. Towers-Smith, *The British Medical Journal*, January 18, 1890, 163.

<sup>42</sup>Mortimer Granville, *The British Medical Journal*, May 9, 1891, 1036.

<sup>43</sup>Niell MacGillycuddy, “Phenacetin,” *The British Medical Journal*, July 25, 1891, 190.

antiseptic. He said it was “perhaps as reliable a pulmonary antiseptic as any we know of.” His proof was that “In an hour or so after its administration it is clearly recognised in the patient’s breath.”<sup>44</sup> Modern readers may be skeptical about using a substance that the present dictionary defines as “a colorless volatile toxic liquid with a distinctive odor, obtained from petroleum.”<sup>45</sup> But Dr. Robertson saw its use as completely justified: “If we are to suppose influenza to be of microbic origin and that the germs of the disease first make their assault on the pulmonary mucosa, then there seems to be an indication for the adoption of some such volatile antiseptic as benzol.”<sup>46</sup> If it was unsatisfactory to swallow the substance, one might adhere to another doctor’s recommendation of a similar chemical compound. Physician Francis Taylor Simson had previously used quinine without success, and once he fell ill he “concluded that my blood must be full of some very rapidly reproductive microbes.” His solution was to inject “pure carbolic acid” three times each day.<sup>47</sup> Similar to benzol, our modern dictionary defines this substance as a “poisonous caustic crystalline compound.”<sup>48</sup> Using this allowed Simson to continue practicing medicine,

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<sup>44</sup>William Robertson, “Benzol in the Treatment of Influenza and its Complications – Pneumonia, etc.,” *The British Medical Journal*, January 23, 1892, 171.

<sup>45</sup>“Benzene,” Microsoft Encarta Reference Library 2004.

<sup>46</sup>Robertson, 171.

<sup>47</sup>Francis Taylor Simson, “On the Treatment of Influenza,” *The British Medical Journal*, January 23, 1892, 171.

<sup>48</sup>“Phenol,” Microsoft Encarta Reference Library 2004.

despite “a temperature of 102°.”<sup>49</sup> Other doctors concluded that the simplest traditional advice worked best: “many patients have progressed equally rapidly towards convalescence when nothing but rest in bed, suitable food, and other general measures have been relied upon.”<sup>50</sup> Dr. Vernon Jones argued that “if the patient be early put under favourable circumstances, it has a tendency to get well of itself.”<sup>51</sup> Dr. Shelton Daly of Manchester wrote, “I have found the hot pack relieve all the urgent symptoms of influenza.”<sup>52</sup>

It is difficult to determine which response was superior – to try everything or to do nothing, but *The Spectator* argued that doctors had not exploited the opportunities afforded by the disease. For them, practitioners had “been wonderfully careful and self-restrained; have, in London at least, avoided taking advantage of their great opportunity, and have proclaimed everywhere with one accord that there is no specific for influenza, that its victims must trust mainly to ‘bed’ as the preservative of nervous force, good nursing, and patient persistence in slowly recuperative diet, milk in all its forms being the best.”<sup>53</sup> Not all doctors thought that their colleagues acted

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<sup>49</sup>Simson, 171.

<sup>50</sup>Althaus, 346.

<sup>51</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, February 6, 1892, 288.

<sup>52</sup>Shelton Daly, “Hot Pack in Influenza,” *The British Medical Journal*, April 2, 1892, 751.

<sup>53</sup>“The Influenza,” *The Spectator*, May 23, 1891, 719.

prudently, though. Dr. P. Boobbyer of Nottingham wrote that “The foolish use of drugs and over-treatment of various kinds, both by way of prevention and cure, are undoubtedly fruitful sources of mischief. The almost reckless personal use of quinine, arsenic, nux vomica, and other drugs is practised on every hand by medical men and laity alike.”<sup>54</sup> At Her Majesty’s Prison in Birmingham, “As a prophylactic measure each prisoner was required from January 17<sup>th</sup> to take eight grains of quinine daily.”<sup>55</sup>

Among the lay treatments was tobacco. As one article stated,

Let snuff-takers postpone abandoning that dirty and ugly practice till the pestilence passes away, for the queer instinct of the common folk, which suddenly doubled the sales of Scotch snuff, has probably a basis. Tobacco is of no use as a prophylactic against influenza, but the thickening of the mucous membrane, which comes of snuff-taking, is probably a protection, and points to a quite possible preventive. So also, and a much better one, is solid quinine, the only protection against aguish fever which travelers in the tropics trust.<sup>56</sup>

But many professionals were aware that they did not know how to effectively deal with the disease. In 1891 Sir Peter Eade said, “I fear that our increased experience has not shown us any specific remedy capable of controlling the disease.”<sup>57</sup> After the 1892 epidemic had essentially ceased, Dr. Frank Hay of Perth wrote, “Our observation with

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<sup>54</sup>P. Boobbyer, “Imprudent Use of Drugs in Influenza,” *The British Medical Journal*, January 30, 1892, 250.

<sup>55</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 233.

<sup>56</sup>“The Influenza,” *The Spectator*, May 23, 1891, 719.

<sup>57</sup>Sir Peter Eade, “Influenza in 1891,” *The British Medical Journal*, August 8, 1891, 310.

regard to treatment was that, while relieving the symptoms, it seemed not to influence the course of the malady.”<sup>58</sup> So, while they might be able to alleviate some of the patients’ distress, albeit temporarily, they had no real control over the pestilence. Parsons admitted as much in 1891 when he wrote, “it cannot be said that we are yet in a position to advise any measures with a view to prevent the occurrence of another epidemic of Influenza.”<sup>59</sup> For some, the problem was one that existed far before the influenza epidemics of the 1890s. A writer for *The Spectator* argued that the difficulty lay within the medical profession: “It is mortal disease which really interests them, not disease which only harasses. They have never really helped anybody against ‘colds,’ or sea-sickness, or toothache, or any of the dozen minor but serious miseries of the flesh which do not threaten life; and till so many of the eminent died, they were half-disposed to class influenza among these.”<sup>60</sup> Even after experiencing three years of epidemic influenza professionals were still not any closer to an answer. In 1893 Parsons admitted, “It is to be regretted that at present our knowledge of the pathology of Influenza does not enable us to advise any measures of precaution further than

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<sup>58</sup>Frank Hay, “Influenza: Notes on a Recent Epidemic at James Murray’s Royal Asylum, Perth,” *The British Medical Journal*, May 14, 1892, 1017.

<sup>59</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 118.

<sup>60</sup>“The Influenza,” *The Spectator*, May 23, 1891, 719.

those contained in the Provisional Memorandum issued by the [Local Government] Board on January 23, 1892.”<sup>61</sup>

While some forms of treatment carried over from the 1890s, other methods or ideas were forgotten or ignored. After the disease reappeared in 1918 people began to try everything in an attempt to alleviate the effects of the flu. Nasal washes (most often permanganate of potassium) and throat gargles were some of the most popular suggestions given to those already infected and those who wished to ward off the disease. In October 1918 the LGB recommended “Gargling the throat with a solution of one in 5,000 permanganate of potassium in water containing 0.8 per cent. of common salt night and morning... In addition, this solution should be poured into the palm of the hand, snuffed up through the nostrils and expelled through the mouth.”<sup>62</sup> The same general steps were frequently advised: patients should be isolated, and windows should be opened, letting in as much fresh air as possible (except when there were fogs). Some practitioners, who found their hospitals overcrowded, were forced to put patients outdoors, purportedly obtaining more favorable results than indoors. Aside from these things, in 1918 and 1919 people were again barraged with products being advertised to treat the disease. An advertisement in the *Daily News* on November 2, 1918, for Heppells Mfg. Chemists describes an aerosol spray to eradicate

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<sup>61</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 78.

<sup>62</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 5.

the germ.<sup>63</sup> In March 1919 a doctor wrote into *The Lancet* to talk about the positive results he and ten other doctors had found when dealing with patients after they tried an advertised product called Trimethenal-Allyl-Carbide. He said, “all [of his patients] made a satisfactory recovery. In such a terrible visitation as we had at that time (October to December, 1918) I felt glad to try a remedy that would act as a prophylactic or curative agent in the disease.”<sup>64</sup> Drugs were not the only things advertised. OXO ‘concentrated beef fluid’ was often presented as something that would help with the flu. One such pronouncement stated that the product “Fortifies the System against Influenza Infection... it increases nutrition and maintains vitality in the system, and thus an effective resistance is established against the attacks of the influenza organism.”<sup>65</sup> Competitors advertised similar claims, despite an article in *The Lancet* in which one doctor warned colleagues to “Avoid meat extracts and strong broths” when treating those who fell ill.<sup>66</sup> There were even more ads like this for items that would supposedly prevent or help prevent the flu, including everything from tonics to soaps. From abroad there were other fringe treatments suggested, including

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<sup>63</sup>*Daily News*, November 2, 1918, 8.

<sup>64</sup>H Renny, “Trimethenal-Allyl-Carbide in Influenza,” *The Lancet*, March 15, 1919, 440-1.

<sup>65</sup>*The Times*, February 13, 1919, 5.

<sup>66</sup>Sir Thomas Horder, M.D., “General Principles in the Treatment of Influenza,” *The Lancet*, November 23, 1918, 694.

the ingestion or injection of colloidal gold and mercury.<sup>67</sup> Once again, this shows that they were willing to try whatever means might prove effective, but it also reinforces the idea that their knowledge was scant.

One of the most popularly debated items for treatment was the medicinal benefits of alcohol. It was generally agreed that keeping in good health was the key to maintaining a strong resistance to the disease, and as the January 1892 LGB circular reminded the public, avoiding “excessive use of alcoholic liquors” was one of the primary components in this.<sup>68</sup> This sentiment was reiterated by Liverpool’s Medical Officer of Health in February of the same year, and printed in *The Times*, where he warned readers “not to indulge too much in alcoholic liquors.”<sup>69</sup> But what about the *moderate* use of spirits? Thompson said that “Alcohol, undesirable in the early stage, was sometimes taken with advantage when the febrile symptoms had subsided.”<sup>70</sup> Sir Peter Eade said, “Champagne, or other wine, or some spirit, has been most valuable.”<sup>71</sup> Many practitioners had a specific spirit of choice. John Francis of North Kensington wrote “That hot whisky and water at night disperses the headache, sleeplessness, and fear of death, which is so apt to occur during the middle of the

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<sup>67</sup>*The Lancet*, March 22, 1919, 472 and *The Times*, November 1, 1918, 5.

<sup>68</sup>The National Archives, “Precautions against Epidemic Influenza,” (London, England: MH 113/29, 1892), 3.

<sup>69</sup>*The Times*, February 5, 1892, 4.

<sup>70</sup>E. Symes Thompson, 408.

<sup>71</sup>Eade, 310.

night. Brandy [was a poor choice because it] dries the mouth and upsets the stomach, while gin increased the diuresis and irritability of the bladder.”<sup>72</sup> Dr. J. Leslie Callaghan made sure his patients had “a liberal supply of whisky.”<sup>73</sup> However, like the other treatments that were prescribed in the 1890s, no conclusive evidence was found in favor or against this method of treatment. This was a debate that swung into full force during the period of austerity characterized by the end of the Great War and afterwards. When the LGB issued its circular in October 1918, it had a stern warning against excessive drinking: “alcoholism favour(s) infection ; and complication by pneumonia is especially fatal among immoderate drinkers.”<sup>74</sup> But the call for more alcohol to stem the effects of influenza began soon after this. On November 1, *The Times* made the claim that extra rations would be beneficial, “because food in plenty is a great help in warding off the infection. The same thing would seem to apply to the moderate use of alcohol, especially port and brandy.”<sup>75</sup> In early November, 1918, the Royal College of Physicians published a memorandum about influenza. It was also reprinted in its entirety for the public in *The Times* on November 12, 1918. Among other things, it responded to these issues by saying: “Alcoholic excess invites disaster:

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<sup>72</sup>*The British Medical Journal*, January 30, 1892, 245.

<sup>73</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, 288.

<sup>74</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 7.

<sup>75</sup>*The Times*, November 1, 1918, 7.

within the limits of moderation each person will be wise to maintain unaltered whatever habit experience has proved to be most agreeable to his own health.”<sup>76</sup> This was in line with the style of thinking popular during the pandemics. The theory was that changing one’s habits would be jarring to the body, thus making one susceptible to infection, and it was an idea that stretched back to the 1890s. In January 1892, H.W. Tyler wrote a letter to the editor of *The Times* that paraphrased a physician’s argument that called for stimulation. He says that people who practiced moderation could be stimulated after an attack by new types of food and drink. But he warned that for overindulgent people there could be negative effects: “too much stimulant in the way of diet must, when the patient has been weakened by this disease, tend to induce an unhealthy condition of the blood and lead to pneumonia, pleurisy, bronchitis, and inflammatory diseases of other organs.” He wondered “whether these diseases, which have recently proved so fatal, are not more due to over-stimulation and diet than to any natural consequence from the disease itself.”<sup>77</sup> On December 10, 1918 *The Times* reported that the Ministry of Food was in talks with the Liquor Control Board to make more spirits available for influenza sufferers, and on the 17<sup>th</sup> an article said that special shipments to be prescribed by doctors would be sent to districts in need.<sup>78</sup>

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<sup>76</sup>The National Archives, “Royal College of Physicians Memorandum on Influenza,” November 1918 (London, England: MH 10/83), 2.

<sup>77</sup>H.W. Tyler, *The Times*, January 16, 1892, 10.

<sup>78</sup>“Spirits for Influenza Patients – Extra Supplies Expected Soon,” *The Times*, December 10, 1918, 5 and “Spirits for Influenza – Additional Supplies in Areas

Too much, though, could be detrimental. The LGB had already warned that “Prolonged mental strain or over-fatigue, and still more alcoholism favour infection; and complication by pneumonia is especially fatal among immoderate drinkers.”<sup>79</sup> But that was not the end of the discussion. On January 31, 1919, when the disease was beginning to make its third visitation, *The Times* printed this criticism against temperance: “Fierce controversies have raged about the use of alcohol. The facts would seem to be against those who declare that it is useless. Indeed, the opinion of many of those who have been prescribing it recently is that it forms a most valuable aid to treatment.”<sup>80</sup> Another article, from February 11, 1919, in the same paper recommended drinking wine, especially port, and said “Alcohol should in no circumstances be withheld.”<sup>81</sup> At a meeting of the Institute of Hygiene in London in late February 1919, the Institute’s president, Sir Malcolm Morris, “expressed the opinion that alcohol was not essential either for the prevention or the treatment of influenza.”<sup>82</sup> At that same conference, another physician, Dr. Kirkhope, stated his belief that “alcohol stimulated the activities of the body in resisting disease.”<sup>83</sup> A letter

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Affected,” *The Times*, December 17, 1918, 5.

<sup>79</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 7.

<sup>80</sup>*The Times*, January 31, 1918, 5.

<sup>81</sup>*Ibid.*, February 11, 1919, 7.

<sup>82</sup>*Ibid.*, March 1, 1919, 7.

<sup>83</sup>*Ibid.*

to the editor on March 5, 1919, from Dr. Charles F. Harford, a representative of one temperance society, said that they supported the use of alcohol by doctors as treatment for the flu, but that they did not believe people should be able to drink it in an attempt to prevent infection or to imbibe it without a doctor's prescription, since there was no scientific evidence to support the usefulness of these measures.<sup>84</sup>

The argument over alcohol was not only carried on in the popular press; it also received attention in the scientific journals and publications. In 1892 Althaus stated, "A moderate amount of alcoholic stimulants is useful in most cases where there is loss of appetite and a considerable degree of physical debility, in addition to any special complications and sequels."<sup>85</sup> In an article from *The Lancet*, published on September 7, 1918, one writer claimed that in cases of purulent bronchitis, "We found that the most useful routine line of treatment was by expectorants, combined with free alcoholic stimulation and heart tonics."<sup>86</sup> The House of Commons even debated the issue on February 20<sup>th</sup>, 1919.<sup>87</sup> Some believed that it was of the utmost importance that people maintain the same routine, including diet, that they had before they fell ill. As seen above, this was an idea that predated the current pandemic. In an April 5,

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<sup>84</sup>Dr. Charles F. Harford, *The Times*, March 5, 1919, 8.

<sup>85</sup>Althaus, 350.

<sup>86</sup>A. Maude, "Influenza and Purulent Bronchitis," *The Lancet*, September 7, 1918, 324.

<sup>87</sup>"Supply of Spirits," *The Lancet*, March 1, 1919, 359.

1919 article in *The Lancet*, A.J. Eagleton and H.H. Butcher said “The majority of our patients are used to a certain amount of alcohol, and we prescribed this drug in practically every even moderately severe case.”<sup>88</sup> In a lecture given in Edinburgh, William Russell said that many of the worst cases recovered after “free stimulation,” and that he “would not like to have had to treat these cases and many others without alcohol and camphor. The improvement under them is often very striking.”<sup>89</sup> Sometimes, the recommended treatment was a combination of everything. In the 1890s one medical practitioner said, “The drugs I have used have been antipyrin and quinine in combination, salicylate of soda, and diaphoretics. Plenty of light, nourishing food; champagne.”<sup>90</sup> Another doctor successfully treated one case with “ammonia and bark; turpentine stupes to the chest; plenty of beef-tea and milk, with brandy and champagne.”<sup>91</sup> Physician Francis Taylor Simson of London similarly wrote,

To all but teetotallers I order stimulants, preferably good old brandy, with soda water, and dry champagne of good brand and age. I encourage the patient to eat in spite of his disinclination for food. Good beef-tea, fowls,

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<sup>88</sup>A.J. Eagleton and H.H. Butcher, “Some Points in the Treatment of Complicated Influenza,” *The Lancet*, April 5, 1919, 560.

<sup>89</sup>William Russell, “Some Aspects of the Influenza Epidemic,” *The Lancet*, April 26, 1919, 691-2.

<sup>90</sup>“The Epidemic of Influenza,” *The British Medical Journal*, January 11, 1890, 96.

<sup>91</sup>F.P. Atkinson, “Two Unusual Cases of Influenza,” *The British Medical Journal*, January 10, 1891, 63.

pigeons, game, wild birds, and fish – especially oysters – I find valuable. I do all I can to keep the patient’s strength to a maximum.<sup>92</sup>

However, not everyone in the medical community was in favor of using liquor for treatment.

Some might argue that the call for more liquor was motivated simply by a desire to drink more, and in some cases this may have been the case. There were certainly individuals who were concerned about an unsavory element exploiting the influenza argument. In January 1892 *The British Medical Journal* carried this attack on one person’s effort to procure more alcohol for treatment of flu stricken people: “The announcement that ‘Lady Brooke’s Fund for the Relief of the Distress from Influenza’ had commenced proceedings by distributing 2,000 bottles of brandy is picturesque, but alarming. It is highly suggestive to the comic cartoonist. If this rate of distribution is to be continued, and to extend through the kingdom, the remedy is likely to be worse than the disease.”<sup>93</sup> When she defended her decision a few weeks later, *The British Medical Journal* was still not satisfied: “We are nevertheless of opinion that there is here ‘a good deal of sack,’ and the announcement was certainly made in a sufficiently demoralising form. Alcoholic charity should assume a very

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<sup>92</sup>Simson, 171.

<sup>93</sup>“Brandy and Influenza,” *The British Medical Journal*, January 30, 1892, 250.

discreet and reticent form.”<sup>94</sup> These concerns were revisited in the late 1910s. In 1919 Dr. Harford, a temperance society member, said, “it would plainly be unjust to make the plea for alcohol as a medicine the means of releasing large stocks of spirits to be used as a beverage.”<sup>95</sup> A letter to the editor of *The Times* from February 22, 1919, suggested that the police might dole out the alcohol to those in need to avoid abuse in the system.<sup>96</sup> When a story of abuse occurred, it only confirmed opponents’ worst fears. In 1891 Dr. W.E. Hadden of Portsdown testified that a nearby “medical man” had prescribed alcohol for a patient, and after she recovered “the stimulant was continued... At the time her friend spoke to me she had become a confirmed drunkard, and would not be satisfied with less than a bottle of brandy every day, and she threatened to burn the house if this was not procured for her.”<sup>97</sup> Despite these concerns, it appears that many truly believed that alcohol might have some beneficial use in dealing with the disease. In this atmosphere of uncertainties, where there were no uniformly recognized treatments, it only made sense to try yet another measure in hope that it might offer some sort of relief. And like other treatments, there was no time to pause and conduct a proper study of its effects.

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<sup>94</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 20, 1892, 409.

<sup>95</sup>Dr. Charles F. Harford, *The Times*, March 5, 1919, 8.

<sup>96</sup>*The Times*, February 22, 1919, 10.

<sup>97</sup>“Alcohol in Influenza,” *The British Medical Journal*, July 4, 1891, 55.

The question of alcohol was sometimes tied to the related debate about the type and amount of food people were receiving. Food had long been a central concern for those trying to combat the disease. The 1892 LGB circular, for instance, urged citizens to avoid “unwholesome food.”<sup>98</sup> Dr. F. Orton was of the similar opinion, that “Properly-regulated food, rest, and warmth are the conditions most favourable for guiding all these complaints through their open stage.”<sup>99</sup> Another 1892 writer said, “It is... an axiom that disease seeks out and is peculiarly fatal to those who are badly nourished and consequently enfeebled.” This person believed so vehemently in the idea of getting food to those who needed it, especially the poor, that he or she operated a soup kitchen for the deserving poor, and encouraged others to do so.<sup>100</sup> The notion that proper food was essential was so strong that, in February 1892 the Pope proclaimed Catholics did not have to refrain from eating “flesh meat,” even during Lent.<sup>101</sup> Dr. Stephen McKenzie wrote, “The dietetic treatment should consist of fluid food during the pyrexial stage, mild and soda water, chicken or mutton broth, or beef-tea. When the pyrexia subsides, fish, oysters, and light farinaceous food for a couple of days, then poultry, game, and ultimately return to usual diet.”<sup>102</sup> The notion

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<sup>98</sup>“Precautions against Epidemic Influenza”, 3.

<sup>99</sup>F. Orton, *The Times*, January 26, 1892, 6.

<sup>100</sup>*The Times*, January 28, 1892, 6.

<sup>101</sup>*The Times*, February 1, 1892, 10.

<sup>102</sup>“The Influenza Epidemic,” *The British Medical Journal*, January 30, 1892, 244.

that this sounds like a buffet was not lost on contemporary observers. In the February 20, 1892 issue of *Punch*, an article titled “Robert’s Cure for the Hinfluenzy” has a cartoon with a waiter and a gentleman. The writer takes the guise of Robert the waiter, who described his cure for the flu. “In depressin times like these here, keep the pot a bilin’ so to speak; and stand firm to the three hesses, Soup, Champane, and Sunlight,” he says. His gentleman friend persuaded him to write the article “if ony to prove the trooth of the old prowerb that tells us, ‘that Waiters rushes in where Docters fears to tread!’.”<sup>103</sup>

It has already been shown that in 1918 and 1919 there were many advertisements for meat based broth that touted their restorative and curative properties. On October 23, 1918, *The Times* reported that a Dr. Spilsbury “said that the great protection against influenza was plenty of good food.”<sup>104</sup> Two days later, on the 25<sup>th</sup>, the headline read “Food and Influenza – Increase in Meat Ration Vetoed.” This was in reference to the Northampton Food Committee, who were denied the increase in the meat ration they had asked for.<sup>105</sup> This same story was reported in the *Daily News* that day, which testifies to the importance of the issue.<sup>106</sup> The government

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<sup>103</sup>“Robert’s Cure for the Hinfluenzy,” *Punch*, February 20, 1892, 96.

<sup>104</sup>*The Times*, October 23, 1918, 3.

<sup>105</sup>“Food and Influenza – Increase in Meat Ration Vetoed,” *The Times*, October 25, 1918, 3.

<sup>106</sup>“Spread of Influenza,” *Daily News*, October 25, 1918, 3.

was quick to reply to charges that a lack of food was exacerbating the disease. In the House of Commons on October 28, Mr. Hayes Fisher, then president of the LGB, said that the epidemic was not due to malnutrition.<sup>107</sup> As confident and assuring as this statement was, it did not quiet the critics. On November 1, *The Times* called for more meat rations, since “food in plenty is a great help in warding off the infection.”<sup>108</sup> But when the Royal College of Physicians issued their memorandum little over a week later, they said, “Good nourishing food, and enough of it, is desirable: there is no virtue in more than this. War rations are fully adequate to the maintenance of good health, though they may not afford just the particular articles that each fancy demands.”<sup>109</sup> The *Daily News* had preceded all of these sources in this argument when they published a story that said, on October 24, “One theory put forward for the spread of the malady is the small quantity of meat available, but this is not supported by medical authorities.”<sup>110</sup> Instead, it was the type of food that people were consuming. The paper referenced a “well-known Harley-street physician,” who said that “If women suffer most it is not because they give their meat ration to the men but because they do not recognise the importance of eating good food. People must feed

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<sup>107</sup>“The Epidemic. Individual Duty.” *The Times*, October 29, 1918, 10.

<sup>108</sup>*The Times*, November 1, 1918, 7.

<sup>109</sup>The National Archives, “Royal College of Physicians Memorandum on Influenza”, (London, England: MH 10/83, November 1918), 2.

<sup>110</sup>“Influenza,” *Daily News*, October 24, 1918, 3.

well.”<sup>111</sup> At a meeting of the Royal Society of Medicine on November 14, 1918, which was published in *The Lancet*, Major Greenwood reaffirmed the idea that food shortage was not the cause of the epidemic, since “there was no previous gradual morbidity rise, as would be noticed if this were the case, and the troops both of our selves and our Allies were well fed.”<sup>112</sup> Unlike the question over alcohol, the issue of food did not carry long after the war’s end, and unlike other areas of investigation, in professionals’ minds, at least, the issue was settled.

Despite the proliferation of these many different advertisements, debates, information, and suggestions, time and time again the medical and scientific community reiterated the message that there was no treatment for the disease. In 1890 E. Symes Thompson wrote against those methods circulating among the people: “popular prejudices have exercised an influence in disseminating error which the obstinacy engendered by the evidence of imperfectly observed facts has tended to confirm and perpetuate.”<sup>113</sup> In addition, he made the statement that “no known drug or method of treatment proved to be possessed of the power to cause the attack to abort or to be sensibly abridged.”<sup>114</sup> So if the management of the disease was out of their hands (an opinion that was shared by most, but not all, especially in the latter

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<sup>111</sup>Ibid.

<sup>112</sup>*The Lancet*, November 23, 1918, 704.

<sup>113</sup>E. Symes Thompson, ix.

<sup>114</sup>E. Symes Thompson, 408.

pandemic), then prevention was the other course of investigation. The problem was that no one knew enough about the disease to offer anything more than guesses, albeit sometimes scientifically complex ones. The reason for this lack of knowledge is that in its epidemic and pandemic form influenza is rare, and it offered few chances for people to study it (and only in superficial ways, because the proper tools in which to analyze it were not yet discovered). In 1892 one doctor wrote: “Cures we have none, and common sense suggests that we cannot have while incubation remains unfelt and unknowable.”<sup>115</sup> In Edinburgh, when an attempt was made to study the disease in mid January 1890, they could not proceed because the disease was abating, and they no longer had any patients to use as subjects.<sup>116</sup>

Aside from these debates, much of what was being recommended in 1918 and 1919 had been present in the 1890s. There were a variety of popular preventives that circulated throughout the publications. Everyone was experimenting, hoping to find something that worked. On January 15, 1892, a correspondent for *The Times* said that the low incidence of the disease at the Royal Insurance Company was due to the business’s policy of dotting pieces of paper with eucalyptus oil and placing these around the building.<sup>117</sup> In a letter to the editor Sutton and Sons wrote, “Two years ago, when the epidemic was so serious as to disorganize some other large business

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<sup>115</sup>F. Orton, *The Times*, January 26, 1892, 6.

<sup>116</sup>*The Times*, January 15, 1890, 7.

<sup>117</sup>*Ibid.*, January 15, 1892, 5.

establishments, we kept in each of our offices and seed-rooms steam spray-machines, diffusing eucalyptus oil. We further supplied all of our people twice a day with ammoniated tincture of quinine, in doses of two tea-spoonfuls in a wine-glass of water.” All of their employees, they said, were immune to the disease.<sup>118</sup> In another letter to the editor, J.J. Hissey said the best way to defend oneself against the disease was to “sprinkle a few drops on one’s handkerchief each morning, so that this valuable disinfectant is always present about the person.”<sup>119</sup> Dr. Percy Edgelow wrote, “If influenza be due to a distinct microbe, eucalyptus has, in my judgment, proved a very effective microbicide.”<sup>120</sup> But not everyone was enamored with this extract. Althaus believed that the use of eucalyptus was due to outmoded thinking, “no doubt with the view that it annihilates the ‘air-borne miasma.’ There is no reason whatever to believe that Eucalyptus oil is poisonous to Pfeiffer’s bacillus.”<sup>121</sup> One doctor decried the use of eucalyptus based on personal taste: “dislike grew upon me so much that I shall not again try eucalyptus. I do not think it did any good whatever, but, on the contrary, increased my headache and made me more uncomfortable than I was already.”<sup>122</sup>

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<sup>118</sup>Sutton and Sons, “Eucalyptus Oil and Influenza,” *The Spectator*, January 23, 1892, 120.

<sup>119</sup>J.J. Hissey, “Letter to the Editor,” *The Spectator*, January 23, 1892, 120.

<sup>120</sup>Percy Edgelow, “Treatment of Influenza by Eucalyptus,” *The British Medical Journal*, January 30, 1892, 250.

<sup>121</sup>Althaus, 340-341.

<sup>122</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 13, 1892, 357.

Surgeon J. Benson Cooke of Portland wrote, “More pleasant than this [carbolic solution] or eucalyptus oil is a saturated solution of camphor in pure terebene – and it is equally efficacious. There is some evidence that an atmosphere strongly impregnated with camphor is inimical to disease germs. This is borne out by the experience of the workpeople in factories where this drug is handled for manufacturing purposes.”<sup>123</sup> Regardless, the popularity of eucalyptus was strong. In a letter to the editor on January 26, 1892, a doctor wrote about a prescription that he had given to his patients: “I have visited them all since, and found no reason to regret having sent the medicine before visiting.”<sup>124</sup>

This same hopefulness in experimentation carried into the next pandemic. An article in early November in *The Lancet*, titled “The Treatment of Influenza,” listed a variety of ways that doctors were attempting to cure the disease. Among these were injections of sodium salicylate and strychnine, while another was injecting his patients with garlic oil and ether.<sup>125</sup> Though disparaged in *The Lancet*, in November *The Times* reported about a doctor in Athens who was injecting patients with a combination of mercury and olive oil, purportedly to great success.<sup>126</sup> What we might now call

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<sup>123</sup>“The Influenza Epidemic,” *The British Medical Journal*, March 5, 1892, 509.

<sup>124</sup>*The Times*, January 26, 1892, 6.

<sup>125</sup>“The Treatment of Influenza,” *The Lancet*, November 9, 1918, 644.

<sup>126</sup>“Treatment of Influenza by Mercury,” *The Times*, November 26, 1918 and “The Intramuscular Injection of Mercuric Chloride in Influenza,” *The Lancet*,

‘natural remedies’ were also apparently popular with people in the 1890s and in 1918-19:

During epidemic prevalence the odours which greet us everywhere indicate the faith which the people have in something which makes its presence distinctly evident. The psychological effect is unquestionably valuable as a combative measure; but it is desirable to ascertain if there really is a germicidal value in the emanations from these essential oils.<sup>127</sup>

This doctor concluded in their favor – cinnamon inhaled through a handkerchief, he said, would kill the influenza germ.<sup>128</sup> Nasal washes were also a popularly recommended preventive measure. During the first wave in 1918 *The Times* claimed that “To rinse the mouth and nostrils every morning with a tepid solution of salt and water was a very good safeguard.”<sup>129</sup> Saltwater was commonly recommended, but permanganate of potash was probably more popular as a nasal wash. The LGB’s February 1919 memorandum advised people that

A simple throat gargle for ordinary use is made by adding 20 drops of liquor soda chlorinate to a tumbler of warm water. A solution of common table salt, one teaspoonful to the pint of warm water, to which is added enough permanganate of potash to give the liquid a pink colour (1 part of permanganate in 5,000) is suitable either as a gargle or for washing the nasal passages.<sup>130</sup>

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November 30, 1918, 766.

<sup>127</sup>F.T. Marchant, “Prophylaxis in Influenza,” *The Lancet*, March 8, 1919, 393.

<sup>128</sup>*Ibid.*

<sup>129</sup>“Work Hindered in Mine and Factory,” *The Times*, July 3, 1918, 3.

<sup>130</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 4.

This desire to find something that worked was so intense that one town even distributed “free of charge, at seven depots, an electrolyte disinfecting fluid for the purpose of a gargle and a nasal douche.”<sup>131</sup> Nearing the end of the third wave, in April 1919 a group of doctors, researchers, and officials advocated lung punctures: “This procedure was thought to be safe and one that might with advantage be employed more frequently than is the case.”<sup>132</sup>

Since there was no cure for the disease, the focus was often shifted to inhibiting its spread. What seemed to be the most hopeful method of prevention, and perhaps the most controversial, was the use of vaccines. One optimistic individual speculated in 1892 that “Probably some may live to see the day when we shall inoculate our children with the cultivated virus of scarlet fever, measles, &c., and so prevent, but beware of attempting to cure or cut short, the flowering stage of any zymotic disease.”<sup>133</sup> Althaus similarly wrote, “There are good grounds for believing that the experimental researches which have been lately made... will, in course of time, lead to a similarly rational and successful treatment of the feverish attack of grip, and

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<sup>131</sup>“Food and Influenza – Increase in Meat Ration Vetoed,” *The Times*, October 25, 1918, 3.

<sup>132</sup>The National Archives, “Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919” (London, England: FD1/536, 1919).

<sup>133</sup>F. Orton, *The Times*, January 26, 1892, 6.

thereby prevent the occurrence of dangerous complications and sequels.”<sup>134</sup> By 1918 there was still no vaccine for the flu. In October 1918 the LGB stated, “No vaccine is available for treatment of Influenza, and although, in cases of primary pneumonia and bronchitis, treatment with a vaccine prepared from the particular pneumococcus or other organisms present in the secretions of the patient has sometimes been found useful, no such treatment can be recommended for the pulmonary complications of Influenza.”<sup>135</sup> However, “Prophylactic inoculation of a vaccine derived from a mixed culture of Pfeiffer’s bacillus, of pneumococcus and streptococcus has given indications of possibly useful results.”<sup>136</sup> For those concerned with prevention the search for an effective vaccine became an obsession. Several formulas for vaccines were published. Because people were still speculative about the biological composition of the disease, and about the mechanisms that it used to attack individuals, there was no accepted formula for a vaccine. There was disagreement over whether Pfeiffer’s bacillus should be included, or whether they should concentrate on the so-called secondary invaders such as pneumonia or bronchitis. Some heartily believed in the use of vaccines; others argued that they were utterly pointless.

Nonetheless, several government agencies offered vaccines to their employees. When the Metropolitan Police announced voluntary vaccinations, employees rushed to

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<sup>134</sup>Althaus, 344.

<sup>135</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 5.

<sup>136</sup>Ibid.

apply. On November 29, less than two weeks after the announcement, they had 187 policemen on the waiting list. On December 30, the number was only fifty-one, but by February 26, 1919, an additional 273 had swelled the total number.<sup>137</sup> The LGB condoned actions like this. In February 1919, they stated,

A standard vaccine has been used for this purpose in the Army, and in some districts supplies of this vaccine are issued by the medical officers of health for use in institutions, or to medical practitioners who apply for it. The vaccine does not infallibly prevent complications, but the results of its use have been encouraging. There need be no hesitation in accepting inoculation when it is administered under competent medical advice.<sup>138</sup>

In April 1919 when researchers met at a conference in London, they argued that a vaccine of freshly cultured Pfeiffer's bacillus was promising, though we now know that the bacillus played no role in the disease.<sup>139</sup> By the end of the pandemic, though the question of the usefulness of vaccines was still contested, those in favor had lost significant ground because this method had not shown much success. But researchers were still trying. In February 1920 H.R. Dean, a professor of pathology at the University of Manchester, said that he had 500 to 600 medical students that were

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<sup>137</sup>The National Archives, "Costs to inoculate Metropolitan Police," 1918-1919, (London, England: MEPO 2/8586).

<sup>138</sup>The National Archives, "MEMORANDUM ON PREVENTION OF INFLUENZA," 5.

<sup>139</sup>"Medical Research Committee NOTES UPON THE DISCUSSION AT AN INFORMAL CONFERENCE OF WORKERS HELD AT 15 BUCKINGHAM STREET on WEDNESDAY, APRIL 9<sup>th</sup>, 1919."

willing to be injected with an influenza vaccine so that he could “see what happens if another epidemic comes.”<sup>140</sup>

In the previous chapter I argued that during these pandemics it was mostly business as usual. But if the *public* was generally not too concerned with the disease, there was one group for whom the terrors of the pandemic struck all too close to home: doctors. This was because, unlike the rest of the population, doctors were barraged by cases during the pandemic. In March 1890 it was reported that the doctors at Darwen did “not remember so much sickness prevalent in the town at one time.”<sup>141</sup> The average person might witness a few instances of the disease, but they might also be sheltered from it completely. Doctors, on the other hand, dealt with hundreds, if not thousands, of cases. And they saw the worst cases, since people were apt to postpone visiting or calling on doctors unless the situation was dire. Cases could be quite gruesome, presenting disturbing conditions, horrid deaths, and perplexing autopsies. Althaus remarked that “the virulence of this substance is most remarkable, causing, more especially when it falls on a suitable soil, an immense variety of symptoms, not only during the primary attack, but also in many cases for a long time subsequently, and leading not unfrequently to a fatal issue.”<sup>142</sup> Dr. Bruce

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<sup>140</sup>The National Archives, “Influenza Epidemic: Informal Conference of Research Workers,” (London, England: FD 1/545, 1920).

<sup>141</sup>“Fresh Outbreaks of Influenza,” *The British Medical Journal*, March 1, 1890, 494.

<sup>142</sup>Althaus, 9-10.

Low recorded that the medical practitioners in Derbyshire described “A peculiar pungent odour was remarked as coming from the sweat of Influenza cases. This odour caused the medical man to sneeze on entering the room in special instances. The smell was variously described as ‘peppery,’ or as ‘mousey,’ ‘fusty,’ or ‘mouldy’.”<sup>143</sup> One doctor described a patient with a “face of bluish tinge.”<sup>144</sup> They remarked about the same feature in the later pandemic. In 1920 Herbert French recalled, “in going round a large ward one could, without examining the patients at all beyond looking at their countenances, pick out those who were going to die with almost uniform certainty by reason of their colour alone.”<sup>145</sup> For those inspecting cadavers the prospects were also grim. Thompson cited a doctor’s observations of autopsied bodies, in which “The lungs were studded with patches of congestion, from which, on section, exuded a yellowish, purulent, or dark red material.”<sup>146</sup> In British army hospitals in France in 1918, one team found that post-mortem the lungs were “filled with thick greenish yellow pus, which exude[d] copiously on pressure.”<sup>147</sup>

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<sup>143</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 61.

<sup>144</sup> Robert M. Simon, “Cases of Influenza with Severe Abdominal Pain and Collapse,” *The British Medical Journal*, June 13, 1891, 1275.

<sup>145</sup>French, 73.

<sup>146</sup>E. Symes Thompson, 404.

<sup>147</sup>W.H. Tytler, et. al., “Pathological and Bacteriological Findings in Fatal Cases of Pneumonia During the Influenza Epidemic of October and November, 1918,” in Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 77.

Another group observed that “Often frothy sanious fluid was exuding from the mouth and nostrils” of those who had died due to influenza.<sup>148</sup> Sometimes doctors were immediately met with patients who had advanced cases of the disease because people hesitated to seek medical attention due to financial hardship. Though some areas opened free clinics, people might still be turned away because of the sheer numbers seeking help. This happened in the later pandemic, too. In early November, 1918, the *Daily News* reported, “there was yesterday a queue 100 yards long outside one doctor’s surgery.”<sup>149</sup>

Some doctors, like F.P. Weber of the German Hospital, London, kept detailed notes about all of their patients. Miss Lily Milgram was a 23 year old woman who had been ill for 10 days in late October 1918. She was prescribed moderate alcohol and quinine, but she died the day after he observed her. Oscar Drucker was a 28 year old who was admitted December 16, 1918 “in a feeble, semi-delirious, condition, with considerable impairment of resonance over the lower position of the back of both lungs and with a little crepitation in the left infra-scapular region.” He had been ill for over two weeks, and was injected with camphor oil, but died two days after being admitted. On January 5, 1919 Weber observed Mrs. Rosa Forbes, a 53 year old

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<sup>148</sup>J.W. Patterson, et. al., “Report on the Bacteriology and Pathology of 46 Fatal Cases of Influenza,” in Great Britain, *Studies of Influenza in Hospitals of the British Armies in France, 1918* (Oxford: H. M. Stationery Office at the University press, 1919), 89.

<sup>149</sup>“Flu Epidemic – Many Victims Still in the Manufacturing Towns,” *Daily News*, November 5, 1918, 3.

policeman's wife. When she was admitted she had been ill for eight weeks. He wrote, "After almost two weeks after admission I thought she was going to recover, but she died." Hirs Misrock, a 55 year old "Russian Hebrew commercial man in London," was ill for four days before he was admitted March 18, 1919, and he died unexpectedly on March 23. Philip Fischman was an 8 ½ year old boy who was admitted in March 1919. When they operated on him to relieve pain near his ribs, the surgeon "found thick greenish (non-offusion) pus in the right pleura just outside and interior to the right nipple" and pus near the ribs, and "the boy suddenly died on the operating table."<sup>150</sup> Weber recorded a fair share of deaths, but he also dealt with an even more considerable amount of suffering in the people who recovered.

Not every experience was the same, though. It is a curious fact that the existence of a pandemic did not mean that everyone experienced the disease. There were those unaffected by even such widespread events as these, and this included medical practitioners. In 1892 Sir Douglas MacLagan explained, "I hesitate to express any confident opinions regarding influenza, because, from my confining myself very much to my university and official duties, I have not seen enough of the present epidemic to enable me to formulate general conclusions."<sup>151</sup>

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<sup>150</sup>Wellcome Library, "Notes from F. Parkes Weber, from the German Hospital," (London, England: PP/FPW/B.251/1, 1918).

<sup>151</sup>"Clinical Aspects of Influenza," *The British Medical Journal*, 287.

Often doctors made quite dramatic statements. In the preface to his 1890 book, E. Symes Thompson, a professor and physician, began by writing “The disorder which is the object of this work to illustrate has spared no part of the world in its circuit, visiting the British Isles with great severity, and has of late returned.”<sup>152</sup> This statement seems to allude to a ravenous disease that was terrorizing the people, yet we now know from the historical record that this first awakening from its dormancy in these years was its mildest. In 1892 Richard Sisley remarked, “I think it will be admitted that an epidemic of influenza is a serious national disaster, and that, therefore, if we know how the disease is spread, it is of importance that this knowledge should be put to some practical use.”<sup>153</sup> But it was not viewed in this light. He further stated, “In influenza we have to deal with a contagious and with a very destructive disease.”<sup>154</sup> Decades later Basil Hood, of the St. Marylebone Infirmary, was another who described a current epidemic rather distressingly. In his journal he wrote that in October 1918, “the great and awful influenza epidemic fell upon us & under which the place literally reeled.”<sup>155</sup> These people were surrounded by the disease and its effects on sufferers for the majority of every day during the epidemics.

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<sup>152</sup>E. Symes Thompson, v.

<sup>153</sup>Richard Sisley, “A Study of Influenza; and the Laws of England Concerning Infectious Diseases,” *The British Medical Journal*, January 23, 1892, 168.

<sup>154</sup>*Ibid.*

<sup>155</sup>Wellcome Library, Basil Hood, “Notes on St. Marylebone Infirmary, later St. Charles Hospital,” (London, England: GC/21/1, 1910-1941), 93.

They were forced to work with patients they could do little for, and many whose hope of survival was bleak. The work done to help sufferers was selfless and valiant. And they often saw their colleagues fall ill, and sometimes die, from the disease. So unlike the general public, influenza was especially vivid for those in the medical community.

It was certain that during any major outbreak doctors and their staffs would be required to make sacrifices. One of these was keeping extraordinarily long working days. Early on, in January 1890, Dr. J.W. Hunt of Dalston was already feeling the pressure. He said, "I am seeing more cases every day than I am usually in the habit of seeing for all other diseases put together. In fact, I am so pressed that I have not time to go into figures and tell the exact numbers."<sup>156</sup> In late February, 1895, after the pandemic had subsided, a new epidemic sprouted up. *The Times* reported that "In all parts of the metropolis the doctors are attending to an unprecedented number of cases." Demand was so great that "Many of the doctors are keeping their surgeries open until a late hour at night, and will open on Sunday."<sup>157</sup> The case was even worse in 1918, because the situation was exacerbated by the war, which caused shortages in the medical community. Dr. Richard Reece of the War Office wrote, "We fear things more when we do not understand them than when we are well acquainted with them. A big war, troops collected in masses, a pandemic of Influenza... and so forth are

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<sup>156</sup>"The Epidemic of Influenza," *The British Medical Journal*, January 11, 1890, 95.

<sup>157</sup>*The Times*, February 28, 1895, 3.

outside my previous experience, and I am correspondingly concerned.”<sup>158</sup> Basil Hood wrote that in 1917 they were “Already grossly squeezed of staff for Army – we could do no more.”<sup>159</sup> When the influenza pandemic hit more than a year later, he was forced to rely on nurses that were untrained in the type of hospital work they were needed for. He said, “The hard labour & distress of that time especially was terrific indeed and hardly bears thinking about... Not only was there a great inrush of cases, many critically ill with influenzal pneumonia but the staff also began to go down like flies, nurses, domestics, porters, practically none of whom could be replaced even temporarily.”<sup>160</sup> The demands of the home front versus the war front formed a common target for the doctors to criticize the government. In late October, 1918, Sir Auckland Geddes, Minister of National Service, told the House of Lords that “severe fighting on a great scale in all theatres of war has imposed an additional heavy strain on our medical resources.”<sup>161</sup> But the government was still slow to demobilize staff and shift resources. Other bodies might exacerbate this dearth. When the Metropolitan Police Force decided to inoculate officers, they saved their overworked staff from this task and instead dumped it on the hospitals. M.A. Cassidy, Physician to

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<sup>158</sup>The National Archives, “Influenza Committee Correspondence with LGB and War Office,” November 7, 1918 (London, England: FD 1/535).

<sup>159</sup>Basil Hood, “Notes on St. Marylebone Infirmary, later St. Charles Hospital,” 93.

<sup>160</sup>Basil Hood, 127 [front and back].

<sup>161</sup>*The Times*, October 30, 1918, 8.

the Metropolitan Police, wrote, “It has not been considered wise to ask the Divisional Surgeons already overburdened with work, to undertake the irksome duties of inoculations, which can be performed more conveniently and expeditiously at a hospital.”<sup>162</sup> Dealing with the pandemics was tiresome.

One of the reasons why doctors were alarmed in the 1890s is because they were besieged by influenza. Coming into contact with so many cases, the medical community was particularly susceptible to a disease that spreads as easily as influenza does. In 1891 Dr. R. Bruce Low said, “Medical men and their families have suffered in great proportion, and some of these may have innocently spread the ailment while struggling against the effects of the disease.”<sup>163</sup> And accepting that it traveled through personal contagion was not enough to guard against an attack. One doctor noted how, when one of his servants fell ill, he sent his daughter to a friend’s house so that she might escape the disease. However, unbeknownst to him she had already caught it, infecting the entire household of the friend.<sup>164</sup>

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<sup>162</sup>The National Archives, “Costs to inoculate Metropolitan Police”, November 18, 1918, (London, England: MEPO 2/8586).

<sup>163</sup>R. Bruce Low, “Notes on Influenza in Lincolnshire and East Yorkshire,” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 243.

<sup>164</sup>*The British Medical Journal*, January 30, 1892, 245.

The true tale of doctors during the influenza epidemics is one of helplessness, but they did not feel this way. *The Spectator* critically summed up this attitude in early January 1890, saying,

Indeed, we should say that popular belief in any form of determinism had declined in Europe, superseded by an overweening confidence in man's ability to set everything to rights. He can prevent all disease, and abolish all poverty, and console all suffering, and eradicate all vice, and is only prevented, it is argued, from doing all those things by his own stupidity and ignorance. Half the world expects, or thinks it expects, a Utopia in which toothache, for instance, will be cured by sympathy and love, and much of it is ready to spend itself – and its neighbours besides – in the effort to reach that beautiful dreamland.<sup>165</sup>

Medical practitioners were making these types of optimistic claims. In 1890 E. Symes Thompson stated, “The analogies traceable between influenza and other disorders... are so remarkable as to encourage the hope that the study of this malady may help us to distinguish between the essential circumstances and the modifying influences concerned in producing the phenomena of epidemic disease in general.”<sup>166</sup> Despite the seriousness of the disease, Thompson was also hopeful in the effectiveness of his colleagues: “if properly attended to, influenza is usually a mild and ephemeral malady.”<sup>167</sup> Sisley thought that knowledge would enable its defeat: “This case not only points to the contagious nature of influenza, but also shows the importance of practically recognising the fact by adopting precautionary measures against its

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<sup>165</sup>“The Influenza and European Fatalism,” *The Spectator*, January 11, 1890, 49.

<sup>166</sup>E. Symes Thompson, viii.

<sup>167</sup>*Ibid.*, 407.

spread.”<sup>168</sup> In 1892 R. Ruttle of Accrington wrote, “Now that Pfeiffer has found the bacillus and his observations receive the powerful confirmation of Professor Klein, it surely will not be difficult to discover a germicide which will thoroughly disinfect the oral and nasal passages at least and so reduce to a minimum the danger of infection from the more lethal complaint.”<sup>169</sup> Some doctors, though, did not even believe influenza was a threat. Dr. J.S. Bunting wrote,

Influenza cannot be considered a dangerous infectious disorder, because with proper care it is not more dangerous than measles, with which it has many points in common, and both are dangerous if neglected. Judging from the history of previous epidemics, influenza is about played out, and will probably shortly disappear, to come back and astonish another generation of practitioners.<sup>170</sup>

In 1890 R.F. Quinton wrote, “If it be true, as held by some, that the virus is given off in the breath of the patient, we have pretty strong evidence that this virus does not live long, or show such tenacity as the germs of other infectious diseases, notably scarlet fever.”<sup>171</sup> He had observed the disease at a prison, where “Many of these have occupied cells in which infected men, beds, and bedding were for several days together. None of these cells were disinfected, nor were any special precautions taken

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<sup>168</sup>Sisley, *Epidemic Influenza*, 53.

<sup>169</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 13, 1892, 356.

<sup>170</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, 290.

<sup>171</sup>R.F. Quinton, “An Epidemic of Influenza in a Prison,” *The British Medical Journal*, February 22, 1890, 418.

in regard to them.”<sup>172</sup> These same types of feelings might be echoed through official channels, too. In Parsons’s report of 1891 the Medical Officer, George Buchanan, said

By having established a place for this Influenza among infectious diseases, we assert a position for the disorder within a class of diseases over which we habitually exercise a measure of control. But from what we have thus far seen of the specialties of Influenza we cannot feel particularly confident of our ability, under the existing conditions of society, to successfully defend ourselves against a further outbreak.<sup>173</sup>

This statement shows that the author had confidence in scientific research, but he lacked a faith in the people – that they would take the steps available and necessary to combat the disease until these advances could be made. An 1891 article in *The British Medical Journal* said,

Before influenza becomes epidemic among us again, as it seems likely to do, could not some means be taken to impress people with the precautions needful to prevent its spread? Dr. Parsons’s report may have done something towards teaching greater care, by declaring the disease infectious. What wants urging is that it is infectious in its very early stages, so that isolation should be most prompt to be effectual.<sup>174</sup>

The primary recommendation was isolation. Dr. Stephen Mackenzie wrote, “The avoidance of all intercourse with those suffering from the disease is the most important

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<sup>172</sup>Ibid.

<sup>173</sup>George Buchanan, “Introduction by the Medical Officer” in H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), x.

<sup>174</sup>L.A.M., “The Infectious Period in Influenza,” *The British Medical Journal*, November 14, 1891, 1081.

of preventive measures.”<sup>175</sup> Sir Peter Eade believed that even partially following this course of action would be beneficial. He said, “As with other infectious diseases, the one great remedy is separation of the sick from the healthy. Absolute separation is, of course, impracticable, but efforts in that direction might be made to a larger extent than they are. If persons would, as soon as they are attacked, shut themselves away in a room... there would be no reason for the rest of the family contracting the disease.”<sup>176</sup> The problem is that, despite the hubbub among the medical community, the influenza pandemic of the 1890s was not impressive enough to inspire these precautionary measures. Even flare-ups in the interval between the pandemics did not cause alarm. The 1920 MOH report stated that “1915 returned from the whole of England and Wales... more deaths attributed to influenza than any other year of the 20<sup>th</sup> century... But this fact did not arouse much general interest, more attention was directed to the increase of deaths from poliomyelitis and from cerebro-spinal fever.”<sup>177</sup> Simple measures on hygiene had to be reiterated by the government in the 1910s. In 1920, after the pandemic was over, George Newman wrote, “Two other practical steps remain. First, we must fortify our administrative methods for dealing with such scourges as influenza, and secondly, we must instruct the whole population, child and

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<sup>175</sup>“The Influenza Epidemic,” *The British Medical Journal*, January 30, 1892, 244.

<sup>176</sup>“The Epidemic of Influenza,” *The British Medical Journal*, November 14, 1891, 1058.

<sup>177</sup>*Report on the Pandemic of Influenza, 1918-19*. 35.

adult, in the laws of preventive medicine. ... a simple hygiene of the mouth and nose is of more value than any specific medication.”<sup>178</sup>

In the 1890s they may not have known how to deal with the disease, but as shown above they were not willing to exclude the idea that they might soon have it under their control. In 1892 Althaus wrote, “The time does indeed not seem far distant when we may expect ‘carbolised curative serums’ of all infectious maladies to be procurable and ready for use in the same way as we now have hypodermic tablets of the ordinary alkaloids at our disposal.”<sup>179</sup> This faith in a cure is illustrated by many examples, but one of the surest is the continuous attempts both during and after the epidemics to find a vaccine for the prevention of the disease.

What is strange is that even though doctors experienced the epidemics more than the general public, they seem to have maintained or recovered their confidence all the same. They believed in future discoveries blindly, as older generations had believed in magic. The story was not entirely negative even for those who lived through the 1918-1919 pandemic. In February 1919, after the worse had passed, the LGB asserted, “The epidemic cannot be stopped. But steps can be taken which in the aggregate will reduce the opportunities of simultaneous exposure to infection.”<sup>180</sup>

Poring over F.P. Weber’s hundreds of case notes, one sees the deaths, but one also

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<sup>178</sup>Newman, xxii.

<sup>179</sup>Althaus, 344-345.

<sup>180</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 12.

sees a remarkable amount of people who recovered. George Hayner (7 ½ years old), John Reid (16), Miss Irma Bieger (30), Sid Sackmaker (20), Mr. Ian Martens (29), Miss Katharine Poliuska (29), and Mr. Lazarus Ledermann (48) are just a sampling of those that Weber treated successfully. And if one notices the ages in this sample, more than a few are from the age brackets most susceptible to the disease. In this later pandemic they were also still confident in their methods. In the fall of 1918 Dr. L. Rajkmann expressed the urgency of implementing a scheme to research the disease when he wrote, “There is no time for Delay as the secondary wave of the pandemic has broken loose already, even earlier than it was anticipated in August when a similar scheme of research was first brought forward.”<sup>181</sup> This was not the statement of someone who had surrendered. And in 1920 they were already preparing for another outbreak. A letter in January sent to various researchers stated, “in the event of another influenza epidemic occurring in the immediate future... It appears to the Committee to be highly desirable that there should be the maximum amount of co-operation between ‘field’ and laboratory workers, in order that the latter may receive all possible facilities for the study of the subject.”<sup>182</sup> In the 1920 Ministry of Health report, George Newman pushed his colleagues to forge ahead: “The prospect is not cheerful, but we must face it with equanimity and all the resourcefulness of the spirit of

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<sup>181</sup> “‘The pathology of Influenza’ by Dr. Rajkmann”, 3.

<sup>182</sup>“Influenza Epidemic: Informal Conference of Research Workers.”

adventure and quest.”<sup>183</sup> Preparations would not be made by those who felt they had nothing to offer.

Despite this atmosphere of optimism, not everyone was convinced in the forthcoming triumph of science. As a writer for *The Spectator* stated, “The notion that modern science can find out everything, is a pure illusion.”<sup>184</sup> And in some ways, these earlier skeptics were vindicated. In 1918 the LGB admitted, “We are ignorant as to the causes which lead to the occasional world-wide spread of Influenza.”<sup>185</sup> Even after the experience of the great pandemic of 1918 and 1919, not much changed in the area of knowledge about influenza. The LGB asserted that the disease was contagious despite observations that seemed to contradict this, but they defended this assertion with past findings: “The rapidity of its spread is such as to suggest that it occurs irrespective of human contact; but the careful inquiries made and collected by Dr. Franklin Parsons lend no support to this view.”<sup>186</sup> They had also clearly stated how the disease was spread when they wrote,

Infection is conveyed from the sick to the healthy by the secretions of the respiratory surfaces. In coughing, sneezing, and even in loud talking these are transmitted through the air for considerable distances in the form of a fine spray. There is a special danger of receiving a massive infection

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<sup>183</sup>Newman, xxi.

<sup>184</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>185</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 4.

<sup>186</sup>*Ibid.*, 3.

from a person talking loudly within 4 feet or coughing or sneezing, without interposing any screen, within 10 feet.<sup>187</sup>

But despite these items that they were fairly confident about, there were still many uncertainties. There was the question of long-term effects. They had discussed this in the 1890s, and in the 1920s they still did not know what condition the previously afflicted populace would end up in. Some soldiers even claimed that the influenza they had suffered from in active service had given them long term symptoms, though inspectors were unable to find any evidence of this, in one case noting, “There is no disability, except as regards to his subjective statements.”<sup>188</sup>

Some wondered if the country was any better prepared for another outbreak. In the 1890s observers were forced to accept the realization that nothing they had done up to that point, none of the strides made in respect to other diseases, could be transferred to influenza. E. Symes Thompson eloquently summed up their shared ignorance on the topic by saying, “The disease... exhibits in the well-ordered mansions of modern days, phenomena similar to those which it presented in the time when rushes strewed the ground in the presence-chamber of our monarchs, and decaying animal and vegetable matter obstructed the porticoes of palaces.”<sup>189</sup> The lay journal *The Spectator* reported in 1891 that, “When the rich and the specially skilled are

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<sup>187</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 3.

<sup>188</sup>The National Archives, “Ministry of Pensions and successors, Selected First World War Pensions and Award Files,” (London, England: PIN 26/1692, 1915-1921).

<sup>189</sup>E. Symes Thompson, viii.

seized in the largest proportion, hygienic science, which is, of course, in its essence preventive and not curative science, must confess itself baffled; and that, for men of the age who believe in science only, is not a pleasant thought.”<sup>190</sup> Over three decades later, they were still in the same situation. In 1922 an article in *Nature* contained this sentiment: “we cannot be said to have greater knowledge of the disease, from the point of view of preventive medicine, than when Dr. Parson’s reports were issued” in the 1890s.<sup>191</sup> This statement perfectly sums up the case. Little new information was learned. There was no cure for the disease and no way to prevent it. Not in Britain, and not in the United States as John Barry argues in his 2004 book *The Great Influenza*, was there the triumph of ‘modern’ medicine. Barry writes, “When [the 1918-1919 pandemic] came, [a new crop of American doctors and researchers] placed their lives in the path of the disease and applied all their knowledge and powers to defeat it. As it overwhelmed them, they concentrated on constructing the body of knowledge necessary to eventually triumph.”<sup>192</sup> In reality, though, the disease was not defeated, and there was no triumph. Modern fear of influenza shows us as much. After the pandemic ended, in 1920 George Newman wrote, “The disease simply had

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<sup>190</sup>“The Influenza”, *The Spectator*, May 23, 1891, 718.

<sup>191</sup>“The Influenza Problem,” *Nature*, February 2, 1922 (no. 2727, vol. 109), 129.

<sup>192</sup>John M. Barry, *The Great Influenza* (New York: Viking, 2004), 6.

its way. It came like a thief in the night and stole treasure.”<sup>193</sup> In the 1920s vaccines, methods of treatment, Pfeiffer’s bacillus, and a filter passing virus were all still undecided issues. In terms of lives lost, the impact of what had passed just a few years before was fully known. They were worried about a new pandemic, and despite their efforts they had nothing new to use if this happened again. In the Ministry of Health’s January 1920 pamphlet about influenza they stated, “Almost everybody... is exposed to infection at one stage or another of an epidemic... [and] no certain safeguard against the disease is as yet known to exist.”<sup>194</sup> They could still not answer the questions that Parsons posed in the 1890s: “Does some phase in the life history of a parasitic micro-organism cause it to assume periodically increased virulence? If so, why do these periods occur so irregularly and independently of season? Does the recrudescence of Influenza depend upon external circumstances favouring the multiplication of the micro-organism, or upon diminished powers of resistance on the part of human beings exposed to its attacks?”<sup>195</sup> Perhaps *The Spectator* summed it up best in 1891:

The influenza is a law to itself, a pest with inexplicable caprices, and that fact to reflecting minds very seriously increases its menacing effect. ... It suggests that we might, under certain quite possible conditions, be just as powerless against sickness as against death; that there are causes of malaise of which we as yet know nothing; that when we have killed out

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<sup>193</sup>Newman, xiv.

<sup>194</sup>The National Archives, “Influenza Hints and Precautions”, February 1920 (London, England: T1/2484).

<sup>195</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92”, 49.

one set of weakening or destroying influences, as for example, we may be said to have killed out smallpox in Ireland, or ague in the English cities, we may suddenly find ourselves liable to complaints quite as severe and of another kind.<sup>196</sup>

The medical community had no way to predict the future course of events concerning the disease; no way to know that the virus would be discovered in 1933, and that there would not be another threat until the 1940s. This must have been one of the gravest hours for the medical profession. As Newman said, “What is the world’s outlook upon future pestilences or dangers of pestilence? The answer is that it is gloomy.”<sup>197</sup>

Doctors felt a great strain during the pandemics. They witnessed every sufferer who was willing to seek help from them. In 1918 the *Manchester Guardian* reported that “A doctor was stopped in the street by a woman who said she was suffering from influenza, and, while he was talking with her, she collapsed and died almost immediately.”<sup>198</sup> They were also overburdened with long work hours. Even as the autumn 1918 wave peaked, the *Westminster Gazette* wrote, “While it may be a fact that the epidemic is being gradually mastered, doctors... are still having a strenuous time.”<sup>199</sup> In addition, the answers to the problem were elusive. Doctors could not be certain that anything they did would save a life, though some were more confident

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<sup>196</sup>“The Influenza,” *The Spectator*, May 23, 1891, 718.

<sup>197</sup>*Ibid.*

<sup>198</sup>“The Influenza,” *Manchester Guardian*, July 10, 1918, 6.

<sup>199</sup>*Westminster Gazette*, November 7, 1918, 8.

about their prescriptions than others. And in 1918 and 1919 they were overburdened by the war and the slow pace of demobilization, which had drained their profession of its maximum efficacy. There are many examples that demonstrate this level of desperation. In Ireland, a doctor who had evaded police for months was arrested and then immediately released so that she could treat flu sufferers.<sup>200</sup> Medical professionals often made dire pronouncements because of factors like these. In 1918 Dr. Armstrong from Hackney told an inquiry that “‘I, myself... have no peace day or night’... people [are] dying like sheep.”<sup>201</sup> However, this was not an accurate synopsis of the situation in either pandemic, it was only a narrowly focused snapshot.

Whereas the general public dealt with people who did not fall ill, those who were mildly ill, and only rarely with those who were severely ill, doctors dealt strictly with sufferers. The reality of those on the front line was skewed in an entirely different way than the general public. It is for this reason, and not for reasons of numbers or actual intensity, that they made the statements that they did. It is no wonder that doctors focused on prevention. It was the only assured method to avoid the potentially fatal course of the disease. That they continued to experiment in their practices and submit suggestions for others to the papers and journals shows that they never gave up hope that something might eventually work, but it also shows that

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<sup>200</sup>“Lady Doctor Arrested and Released,” *Manchester Guardian*, November 1, 1918, 10.

<sup>201</sup>“Influenza Plague,” *Westminster Gazette*, October 23, 1918, 8.

nothing as yet had proved totally effective. If no means of intervention succeed once the disease established a foothold, then it seemed only logical to make all attempts to impede the invader.

## Chapter VI – The Government

There was no way to predict or prevent the pandemic that swept the world beginning in 1918. Today's soothsayers rely on historical examples to attempt to validate their prediction, but in reality history cannot forecast the future. The same held true in early 1918. But even though people could not look to the past for information about the onset, duration, magnitude, or any other factor of a potential pandemic, in 1918 the British people would have been wise to have a working knowledge of the history of the flu in their country. The government would have especially benefitted, because it found itself revisiting some of same ground that had been covered in the 1890s. This lack of preparation would open the government up to a barrage of criticism.

Amidst such a major public crisis, what type of government response, if any, did such an event elicit? Public health was certainly a priority in the years before the Great War, especially in a climate of perceived foreign threats and imperial domination. The health of the youth was critical, for they would provide the pool of the future's soldiers. Current historian J.M. Winter has stated,

as all concerned with public health realized, infant mortality statistics did not describe the extent to which poverty crippled as well as killed. For disturbing evidence of the lingering effects of a deprived childhood in late nineteenth and early twentieth century Britain, many doctors, politicians, soldiers, churchmen, and social commentators drew attention to military

enlistment statistics. These seemed to provide the essential link between the reality of public health and the health of the realm.<sup>1</sup>

Much was written about and done to correct the perceived ills in this area, though it was mostly concerned with nutrition and preventatives.<sup>2</sup> But what was done when the population was suffering during a major outbreak?

The background for this, which provided the foundation, was the precedent established during the 19<sup>th</sup> century. There were many reforms in the 19<sup>th</sup> century as England transformed into an urban, industrial society. Perhaps lesser known than the changes made expanding the electorate or broadening the scope of education were the measures that addressed the public's health. There were a series of laws dealing with diseases that were passed both before and during the pandemic of 1889-1892, but none of these applied directly to influenza. The Public Health Act of 1875 carried a £5 fine for anyone who willingly exposed another person when the former was suffering from one of the diseases listed. The Epidemic and Other Diseases Prevention Act of 1883 “[gave] sanitary authorities power to borrow money to be spen[t] in cases of epidemic, endemic and infectious diseases; when such outlay is ordered by the Local Government Board. The money is spent for (1) interments, (2) house visitations, (3) medicine, and (4) disinfection.” The 1889 Infectious Disease [Notification] Act required that medical authorities be notified when an outbreak of any of the diseases

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<sup>1</sup>J.M. Winter, *The Great War and the British People* (Cambridge, MA: Harvard University Press, 1986), 10.

<sup>2</sup>Ibid., 10-15.

listed in the act occurred. The Infectious Disease (Prevention) Act of 1890 allowed for disinfection measures for such things as “bedding” and “houses.” And finally, the Public Health (London) Act of 1891 required notification of “dangerous infectious diseases.”<sup>3</sup> But these measures fell short of including provisions specifically regarding influenza. In 1892 Sisley expressed his dissatisfaction with the system when he said, “The laws relating to infectious disease are by no means simple, and their working powers have still to be put to the test. Did one law apply to the whole country the matter would be comparatively simple. But the laws are diverse and the methods by which they are worked complex.”<sup>4</sup> The difficulty was in getting the people to put their focus on influenza. This was partly caused by the sporadic appearance of the disease in epidemic form. Whereas cholera and smallpox made frequent visitations, it had been decades since the last major outbreak of influenza in 1847. The disease had not been as consistent a killer, nor was it as definable or containable as these other blights. An effective means of preventing smallpox had been found in the late 18<sup>th</sup> century. The origins of cholera, and thus the methods for preventing it, had been discovered at mid-century. But influenza was still an enigma. There were no outward signs like smallpox, no unifying symptoms like cholera, no tests that could be performed, and

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<sup>3</sup>Richard Sisley, “A Study of Influenza; and the Laws of England Concerning Infectious Diseases,” *The British Medical Journal* January 23, 1892, 168-169.

<sup>4</sup>*Ibid.*, 168.

perhaps worst of all, it spread through the air, a concept of disease transmission that was still not universally accepted for influenza in the early 20<sup>th</sup> century.

Edwin Chadwick had done much to reform sanitation earlier in the 19<sup>th</sup> century, and the English were quite aware and proud of this. Further changes in the century had made cholera less of a threat than it was decades before, and diseases seemed to be more manageable than ever. The germ theory of disease had been developed in the 1870s both by the Frenchman Louis Pasteur and the German Robert Koch. And the optimism this inspired carried the belief that epidemics were of the past, and would soon be eradicated.

Word of the approaching so-called “Russian Influenza” in 1889 must have appeared through diplomatic communiques, for the British diplomat to Russia was among those affected by the disease. On November 30<sup>th</sup>, 1889, the correspondent for *The Times* reported, in their first article about this epidemic, that the British ambassador and nearly his entire staff were ill with the disease.<sup>5</sup> This was at least a few weeks, and by some accounts more than one month, from the first appearance of the disease on British soil. This left ample time for some communication of this through official channels. But the nature of this disease, and the organs of government designed to mitigate its effects, were complex. For one thing, it was unknown how or if this disease would come to England. Theories ranged from imported goods (such as that achieved with the dissemination of smallpox) to the wind, but it was also widely

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<sup>5</sup>*The Times*, November 30, 1889, 5.

thought that it was possible that the disease was already present, lying dormant in the population for years. Still, others believed that the disease might never appear in England. The author of an early letter to the editor of *The Times*, from December 26, 1889, placed his faith in England's "belt of sea" and the sanitary works that had been achieved decades before.<sup>6</sup> Given the variety of theories, the government seemed to have adopted a 'wait and see' attitude, for nothing was done during this early stage.

Even after the disease appeared in full epidemic form in January 1890 the government organizations in charge still did not act. It was not until May that, according to *The Times*, an MP from Sheffield enjoined the Local Government Board [LGB] to use its full powers to ameliorate the effects of the disease.<sup>7</sup> However, there was one [passive] action the LGB had been taking since near the start of the epidemic: in mid-January 1890 a questionnaire had been distributed around the country. On January 17<sup>th</sup>, each Medical Officer of Health in England and Wales was called on to answer questions relating to all sorts of aspects of the influenza. These ranged from the standard queries, such as the date when symptoms were first noticeable, to the more detailed request for "Illustrations or observations as to the behaviour of any observed Influenza, especially as to the intervals of attack in members of households, its dissemination among particular communities, and its incidence on particular

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<sup>6</sup>Robert Rawlinson, *The Times*, December 26, 1889, 11.

<sup>7</sup>*The Times*, May 11, 1890, 10.

localities.”<sup>8</sup> This may not seem substantial, and certainly people like the aforementioned MP desired something extra, but there was not much more that could be done. Under the circumstances this fact finding mission may have been the best course of action, because at the time there was little definitive knowledge about influenza. Similar questionnaires had been done before. In 1837 the Hunterian Society asked members to submit answers to a series of queries concerning an influenza epidemic that had just subsided. Some of the questions, such as when the disease started or ended, and whether it appeared concurrently in any animals, were almost identical with the questions requested by the LGB in 1890.<sup>9</sup> The responses were mostly hard facts, with little speculation about the disease. Aside from one respondent, who included the note that “Mr. Crofs, (the Philosopher of the Lecantain Hills, Lourerse Shore) has observed that during & since the prevalence of Influenza, the atmosphere has contained less electricity than usual,” few theorized about the disease.<sup>10</sup> There was already a strong impulse to collect data on the subject decades before, so there existed an established recorded analytical lineage that could have been referenced. In 1890 data was collected from other sources as well. After influenza made its course through the naval vessel *HMS Bellerophon*, stationed in Bermuda, in

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<sup>8</sup>The National Archives, “Local Government Board Influenza Questionnaire,” (London, England: MH 10/54, January 17<sup>th</sup>, 1890), 2.

<sup>9</sup>Wellcome Library. “Hunterian Society Notes.” London, England: 5549/69/6, 1837.

<sup>10</sup>Ibid.

April and May 1890, the reports from the various doctors involved were sent to the LGB.<sup>11</sup> Records from around the country, and the empire, became available to the government.

Data from the LGB inquiries were compiled into a report on the epidemic, authored by Dr. H. Franklin Parsons and published in July 1891. A thorough investigation into influenza with mostly sound conclusions, at least when compared to modern medical knowledge about the disease, the report served as a guide for future LGB publications and influenced the thoughts of the public and practitioners alike. When the LGB distributed a memorandum to the sanitary authorities across England and Wales on the 25<sup>th</sup> and 26<sup>th</sup> of January, 1892, after a new outbreak appeared, they quoted what the Medical Officer had written in the introduction to that report. The memorandum gave advice that was, again judging from present knowledge of the disease, quite sound. The memorandum also calls for isolation of the sick (for the elderly, people in institutions, or the first case in a household) and “disinfection of infected articles and rooms.”<sup>12</sup> Some points would be discarded by future data, such as the notion that “it would seem that infectiveness of Influenza through the atmosphere shows itself over a wider area than the limits of household life,” or the

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<sup>11</sup>The National Archives, “Influenza on the ship *Bellerphon* (1890),” 1890 (London, England: CO/37/221/26).

<sup>12</sup>The National Archives, “Precautions against Epidemic Influenza,” 1892 (London, England: MH 113/29), 2.

idea that mental stress makes one prone to infection.<sup>13</sup> Other ideas, such as the belief in ways “by which the infection can be retained for a time in a state of suspended activity” might seem advanced, given that we now know the disease has a natural avian reservoir.<sup>14</sup> However, popular theories at the time of these types of stasis often failed to mention birds, but frequently suggested items such as people or the soil. What this shows is that future generations cannot, and should not, judge the quality of advice given in the past by modern standards. Instead, what we are left with is a group of suggestions made by people working with incomplete data, a fact that they were well aware of. Any success or, for that matter, failures in their advice resulted from a strategy where all possible, logical ideas were tested.

But what about those who might criticize the government for not doing more? Why did the government not take more proactive steps in warding against influenza, much like they did with other diseases? The reason why the government did not do more was because they knew so little about the flu. The 1892 memorandum began by saying, “since our knowledge of the natural history of Influenza, and especially of the circumstances of time and place under which it spreads, remains most imperfect, any advice which can be given as to the precautions to be taken for its prevention or mitigation can only be correspondingly incomplete.”<sup>15</sup> Even convincing findings on

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<sup>13</sup>Ibid, 1.

<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

the nature of the disease might only lead to an impasse, particularly when officials realized that it would be futile to attempt a generic application of the measures used for other afflictions. The lack of outward signs and the short incubation period were both cited as reasons why “it is not practicable to devise any restrictive measures for the prevention of the spread of Influenza which shall be universally applicable.”<sup>16</sup> And they also knew that it would be impossible to keep wage earners at home when they were only suspected of carrying the disease, which no one could prove with certainty.

The same day that the LGB memorandum was released, *The Times* printed the pamphlet on page four and an article on the disease and letter to the editor on page seven. The letter lists yet another reason why people might be reluctant to act: the universality of the disease. “The fact that almost every one is susceptible is a scientific truth not likely to impress the popular imagination, and lead to precautionary measures,” Frank G. Clemow argued.<sup>17</sup> Still, he seemed unimpressed with the actions that had been taken: “It must be admitted that medicine has not yet discovered the cause of the disease, but the same is true of scarlet fever, measles, and many of the other infectious fevers. Yet these are well under control; isolation and disinfection have worked wonders in limiting their spread; why should they not do the same in

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<sup>16</sup>Ibid, 2.

<sup>17</sup>Frank G. Clemow, *The Times*, January 25, 1892, 7.

influenza?”<sup>18</sup> Clemow concluded his letter with the almost same practical individual action that the LGB recommended, calling for the isolation of infected individuals.

Parsons had established the precedent for individual action in his 1891 report, where he wrote,

As regards disinfection, if the essential cause of Influenza be, as seems probable, a micro-organism inhabiting the mucus of the air passages, it is for the discharges from the bronchial tubes and nostrils that measures of disinfection are indicated; the most convenient and safest being probably to use, instead of a handkerchief, pieces of rag or paper which are immediately burnt. There may be a difficulty in doing this when persons are going about out of doors; but then persons suffering from Influenza should not go about out of doors, both for their own sake and for that of others.<sup>19</sup>

The wording used in these arguments could at times be quite strong. An article in *The British Medical Journal* stated, “Anyone who has influenza is in duty bound to do all that in him lies by avoiding places of public resort, and by refusing to mix freely among his friends to hinder his becoming a disseminating centre of sickness and of death.”<sup>20</sup>

But the effectiveness of isolation was a contentious topic. Many recognized that isolation may have been one of the most effective tools at their disposal in checking the disease. Crowded areas, they argued, were detrimental to health:

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<sup>18</sup>Ibid.

<sup>19</sup>H. Franklin Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” in *Further Report and Papers on Epidemic Influenza, 1889-92* (London: Her Majesty’s Stationary Office, 1893), 81.

<sup>20</sup>“Concerning Influenza”, *The British Medical Journal*, January 23, 1892, 183.

The concourse of people is favourable to the spread of Influenza in two ways. 1<sup>st</sup>. It affords increased opportunities for persons who are in a condition to impart the disease to come in contact with those who are in a condition to receive it. 2<sup>nd</sup>. Where such concourse takes place in a confined space the poison is likely to be present in a more concentrated form, while the powers of resistance may be lowered by the vitiated air.<sup>21</sup>

But was there a practical way to implement it? Isolation seemed to work on a small scale in very controlled circumstances, such as the example Parsons noted about “the prison population”, which “was very lightly affected with Influenza.” Out of 14,389 prisoners, “only one death from Influenza was recorded.”<sup>22</sup> Others were not so sure. Dr. E. Symes Thompson wrote, “The question of isolation is only to be considered when there are in the house or neighbourhood people of advanced age and damaged constitutions, to whom an attack of influenza, simple and uncomplicated, would be serious.”<sup>23</sup> For Thompson and others of a like mind, isolation was only sensible where the situation was dire. Officially isolation continued to be recommended to the general public, but in 1893 Parsons had accepted a chink in the measure. He wrote,

A limit to the possibility of stamping out Influenza by isolation has to be pointed out, viz., that such isolation as is practicable cannot be complete. A sick person with an infectious disease must have attendants to supply his needs, and if these attendants be not protected in some way the disease

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<sup>21</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 50.

<sup>22</sup>H. Franklin Parsons, *Report on the Influenza Epidemic of 1889-90* (London: Her Majesty’s Stationery Office, 1891), 176.

<sup>23</sup>“The Influenza Epidemic,” *The British Medical Journal*, January 30, 1892, 245.

will spread among them, and from them perhaps to other persons outside the place of isolation.<sup>24</sup>

But isolation reappeared in the late 1910s. In October 1918 isolation was highly recommended, and the section carried an asterisk, which meant that these words were approved for the public:

If every person suffering from a fever with or without catarrh were willing and able to stay at home for a few days, the spread of disease in factories and workshops, offices and shops, schools and other institutions, would be greatly reduced. Apart from actual reduction in the number of cases, increased slowness of spread can thus be secured; and this is likely to diminish the risk that successive cases will become increasingly severe.<sup>25</sup>

Isolation reappeared in 1919 in another memorandum. It stated,

Staying at work after the first symptoms appear is bad for the patient and may be dangerous to others. Workers obviously ill should at once be sent or taken home. Where influenza is prevalent no person should in any way be penalized for staying away from work, bona fide, for even a slight attack of influenza or any form of feverish cold. On the contrary, he should be expected and required to do so.<sup>26</sup>

The Ministry of Health (MOH) sanctioned the same method in January 1920:

“Workers who are obviously ill should be sent or taken home at once. Their

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<sup>24</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 79.

<sup>25</sup>The National Archives, “MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” (London, England: MH 10/83, October 22, 1918), 4.

<sup>26</sup>The National Archives, “MEMORANDUM ON PREVENTION OF INFLUENZA,” 1919 (London, England: MH 10/84), 5.

continuance at work is bad for them and dangerous to others.”<sup>27</sup> In the 1890s some were skeptical that workers were staying home for legitimate reasons, and by the late 1910s there was still no test to prove this. Why, then, was the government so strongly in favor of a measure that had been subjected to a fair amount of criticism in the 1890s? It may have been that Parsons was not thoroughly convincing, as much of what he and others wrote and said in the 1890s did not carry over to the 1910s. They may have purposefully ignored the debates of the 1890s, because there still was not anything useful that could be done to halt the disease. It may have been felt that something was better than nothing. Even a minor reduction in the spread might be seen as a victory. It may have made sense during the war (workers spreading the disease among coworkers would hamper the war effort) and afterwards (there may have been an excess of workers for a shortage of work) to advocate this type of behavior. One thing is certain – that this was being advised in 1920 shows that they had no idea if they were through the woods, or what the future held.

If many were critical of isolation, what did people believe the government’s role should have been during the pandemics? For many, including the aforementioned writer, the solution was to make the disease notifiable under one of the existing laws, most often the Infectious Diseases [Notification] Act of 1889. This act had a variety of provisions, and included such diseases as small-pox, cholera, scarlet fever, and

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<sup>27</sup>The National Archives, “Influenza Hints and Precautions,” February 1920 (London, England: T1/2484).

typhus, but influenza was not one of the diseases that the act automatically applied to. Anyone who contracted an illness included in the Act was required to notify the Medical Officer of Health, or be subject to a fine of up to forty shillings.<sup>28</sup> The essential point was that the authorities would be notified when every new case was discovered, which would presumably give the medical establishment time to act. One of the foremost proponents of this action was Dr. Richard Sisley. He began a speech to the Society of Medical Officers of Health January 18<sup>th</sup>, 1892 by saying,

The question which I ask you to consider to-night is whether anything can be done to check the spread of influenza, and whether any of the laws affecting public health can be of use in helping to secure this object. Owing to the present state of knowledge or of ignorance which exists amongst the people of this country with regard to the disease, it is advisable that sanitary authorities should not use any powers they possess unreasonably or without a fair chance of their being successful in accomplishing the end in view. The old idea that an Englishman's house is his castle still exists and is strongly held by the masses of the people, and all interference with what is considered personal liberty is strongly resented.<sup>29</sup>

Sisley argued that the laws in place in 1892 should be applied to influenza, but that in some respects they were ill suited for the disease, especially since they could take weeks to come into effect, requiring so many steps as to make them useless during quick spreading influenza epidemics.<sup>30</sup> He further stated, "At the present time anyone

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<sup>28</sup>Sisley, "A Study of Influenza; and the Laws of England Concerning Infectious Diseases," 134-136.

<sup>29</sup>Sisley, *Epidemic Influenza*, 167.

<sup>30</sup>Sisley, "A Study of Influenza; and the Laws of England Concerning Infectious Diseases," 168.

may without let or hindrance, whilst suffering form influenza, go to any public place, drive in any public conveyance, and spread a disease which, as we have seen, was in the year 1890 responsible for the death of over 27,000 people... this does not seem to be an ideal hygienic arrangement.”<sup>31</sup> He made the case that the situation concerning influenza in Britain was a black mark, something to be ashamed of: “Foreigners justly congratulate us on our sanitary arrangements, but the state of things just mentioned is hardly worthy of the capital of a nation which takes the lead in hygienic measures.”<sup>32</sup> For Sisley, the people in charge of determining whether to apply the laws to influenza were ignorant about the very nature of the disease:

Now, there are Medical Officers of Health who apparently do not know that influenza is infectious, and it can hardly be supposed that local authorities are better informed. It follows from this that the provisions of the Act will not be universally carried out in the case of influenza, so long as local authorities have the right to use, or to neglect to use, the powers conferred on them.<sup>33</sup>

To remedy this situation Sisley wanted the old guard removed from duty. He said,

many doctors and writers, both in the medical and lay journals, taught that contagion played no part in the matter. In May last a conviction that this erroneous tendency did much harm led me to recommend that by a short Act of Parliament Influenza should be placed amongst the disease for which notification is compulsory. I am still of opinion that had this been done much sickness and many deaths would have been avoided.<sup>34</sup>

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<sup>31</sup>Ibid.

<sup>32</sup>Ibid., 170.

<sup>33</sup>Ibid., 132.

<sup>34</sup>Ibid., 168.

But he failed to consider those difficulties concerning isolation Parsons alluded to in the government memorandum because it had yet to be published when he was writing. According to the *The British Medical Journal*, there was much debate following his speech. One person warned that the variety of legislation in place across the country would pose a legal nightmare.<sup>35</sup> At Minster on the Isle of Thanet,

At the Rural Sanitary Authority's meeting subsequently held Dr. Robinson urged upon the board the desirableness of circulating a bill he had drawn up. They had already posted bills warning people of the infectious nature of the disease, and stating that persons exposing themselves while suffering from it were liable to penalties under the Public Health Act. They did not wish to prosecute, because it was unfair to the people when erroneous statements as to the noninfectious character of the disease were being circulated by medical men. The bill had been laughed at, and they had incurred some ridicule for being the first to move in that part of the United Kingdom. He had been prepared for that, but since then the course he recommended had been approved by the Local Government Board, the most influential organ of the Press, *The Times*, and by leading medical authorities. There was no doubt that the infectious character of influenza had been proved up to the hilt.<sup>36</sup>

The effectiveness of the law was muted by a lack of consensus in the scientific community, and in addition, the action made this area a laughingstock. Others argued that implementing the laws would prove a logistical nightmare. For one, there was a lack of hospital beds: "Dr. Blustrode had no hesitation in saying that it would be absolutely impossible to provide adequate accommodation or nursing when such lesser epidemics as those of small-pox and scarlatina put the resources of the metropolitan

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<sup>35</sup>*The British Medical Journal*, January 23, 1892, 190.

<sup>36</sup>*The Times*, January 29, 1892, 7.

asylums to the utmost strain.”<sup>37</sup> Parsons reckoned that “no amount of hospital accommodation which it would be practicable to provide would suffice to receive the patients in an epidemic of Influenza.”<sup>38</sup> Another man was worried that the fee given to doctors for each notified case [“two shillings and sixpence if the case occurs in his private practice, and of one shilling if the case occurs in his practice as medical officer of any public body or institution”<sup>39</sup>] might entice them to diagnose other ailments as influenza.<sup>40</sup> There were also strong opponents, like Althaus, who was completely against this action. He wrote that Sisley’s “proposals of isolation for preventing the spread of the epidemic, appear to me to be utterly impracticable.”<sup>41</sup> Dr. J. Syer Bristowe, Medical Officer of Health for Camberwell, was of the opinion that “any attempt to deal with it as one of the notifiable diseases would involve large expense, much inconvenience, and annoyance.”<sup>42</sup> He was not the only Medical Officer of Health who believed this. In 1893 Parsons wrote, “It appears to me, however, and the

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<sup>37</sup>*The British Medical Journal*, January 23, 1892, 190.

<sup>38</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 80.

<sup>39</sup>Sisley, *Epidemic Influenza*, 135.

<sup>40</sup>*The British Medical Journal*, January 23, 1892, 190.

<sup>41</sup>Julius Althaus, *Influenza: Its Pathology, Symptoms, Complications, and Sequels; Its Origin and Mode of Spreading; And its Diagnosis, Prognosis and Treatment*, 2<sup>nd</sup> Edition, (London: Longmans & Co., 1892), 286.

<sup>42</sup>“Clinical Aspects of Influenza,” *The British Medical Journal*, February 6, 1892, 288.

same seems to be the opinion of many able and thoughtful medical officers of health, that the advantages to be gained from the compulsory notification of Influenza would not in most districts be commensurate with its cost.”<sup>43</sup> Parsons did not reach this conclusion arbitrarily. He was not only using his experience, but he also had all of the returns from the medical officers of health at his disposal. Dr. Newsholme of Brighton told him notification in that district would cost £6,000.<sup>44</sup> This allowed him to project that for the whole realm notification would “entail a serious expense.”<sup>45</sup> But what about all of the those who thought the benefits outweighed the cost? For instance, Dr. John Cragie of Chard wrote, “considering the terrible evil caused by the disease, should not... notification be made compulsory?”<sup>46</sup> Parsons responded that notification would be worthwhile “if there were sufficient ground for expecting that the notification would materially help to check its spread, but [he did] not see that there [was] any such prospect.”<sup>47</sup> These ideas were similar to a statement made in *The British Medical Journal* in 1891. The writer of the article stated,

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<sup>43</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 79.

<sup>44</sup>Ibid., 80.

<sup>45</sup>Ibid.

<sup>46</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 20, 1892, 408.

<sup>47</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 80.

The cost of these notifications [in Bristol] would have been £2,500, and to deal efficiently with the epidemic 100 additional inspectors would be wanted. It is, of course, open to the advocates of notification of influenza to contend that this total would have been lessened had notification been in force early enough, and that, even apart from preventive measures, the exact knowledge of the incidence of every case in an epidemic would be invaluable. For the present we have to look to tangible results, and few practical sanitarians will fail to agree with Dr. Davies that... it is at least premature to spend large sums of money over an ill-understood disease and with very doubtful chances of success.<sup>48</sup>

The debate over notification existed because, as we must remember, not everything was known about the flu. In February 1892 Dr. W. Morton Harman wrote, "I do not think a case has been made out for its being a 'virulent or dangerous infective disease,' and I should say it could be dealt with on much the same lines as an epidemic of malaria abroad."<sup>49</sup> Like this doctor, there were those who did not think that the disease was a threat. But for many there were different reasons to be in support of or against notification. For some, the simple realization that the disease is contagious was enough to justify the same actions taken with other contagious diseases, but for others this was not a practical response for an ailment that was still, for the most part, shrouded in enigma.

The same would be true in 1918 and 1919, for no real new scientific advances had been made. True, Pfeiffer had claimed, and most had accepted, the discovery of the cause of the flu in 1892. If anything, that only made matters worse, for now much

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<sup>48</sup>"Influenza," *The British Medical Journal*, January 2, 1891, 30-31.

<sup>49</sup>"The Influenza Epidemic," *The British Medical Journal*, February 20, 1892, 408.

of the medical and scientific community were focused on a dead end. Aside from efforts to design a vaccine to counteract the supposed bacillus, the knowledge did not dramatically alter the types of action the government took. But in 1918 the government did do more than in the previous pandemic of the 1890s.

On October 22, 1918, the Local Government Board issued its first memorandum on influenza that year, even though the disease had been intermittently spreading there for about four months, and even in the autumn wave the first *Times* article on England had appeared a little over one week before [the first article on Scotland had appeared mid-September]. The *Daily News* broke the story even earlier, on October 9<sup>th</sup>, 1918, though it did say on September 14<sup>th</sup> that Prime Minister David Lloyd George had contracted influenza and was forced to cancel his appointments. So the top government official had fallen ill over one month before a formal statement on the disease was issued. Much of what the memorandum, signed by Arthur Newsholme, the medical officer, had to say was similar to what was being put forward in the 1890s. There was the idea that a first attack did not offer protection against a second [in other words, no acquired immunity] and the same notion concerning the lack of early signs of infection. Hygienic practices were also recommended to the people:

It is most important to avoid scattering infection in sneezing and coughing. A handkerchief should always be employed to intercept droplets of mucus, and the handkerchief should be boiled, or burnt if of paper. Expectoration should be received in a special receptacle, its contents being subsequently disinfected or burnt. ... General disinfection of premises after Influenza is not required, but a thorough washing and

cleansing of rooms and their contents and washing of articles of bedding or apparel is desirable.<sup>50</sup>

It also stated, “Dirtiness, whether personal or of living or working rooms, and dusty conditions, favour infection.”<sup>51</sup> The memorandum endorsed gargles and nasal washes, proper ventilation, the avoidance of crowds and alcoholic excess, and adequate nursing. Compared to previous statements, one noticeable difference is that the piece authoritatively stated, “There is no ground for believing that the virus of influenza can multiply or even persist outside the human body.”<sup>52</sup> But whether sound or not, none of this advice in the memorandum was substantiated by research. Instead, what we have is a variety of means by which an individual could attempt to mitigate the effects of the disease. And the individual *was* the most important part of the equation, as stressed in the publication: “Hitherto little attempt has been made to secure direct control over these diseases ; and such control is only practicable by the active co-operation of each member of the community.”<sup>53</sup> A quite similar sentiment was stated by the government in the February 1919 LGB memorandum. It said,

At present therefore the fact must be accepted that in a period of world-wide prevalence such as this, most members of the public who go about their ordinary vocations must expect to be exposed to infection and many to have the illness in one form or other, all scientific investigation notwithstanding. Nevertheless, it is the duty of the individual not only to

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<sup>50</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 4.

<sup>51</sup>Ibid., 6.

<sup>52</sup>Ibid., 4.

<sup>53</sup>Ibid., 7.

do the best for himself in case of attack, but, as much depends on the intensity and dose of the infection, to do his best also to protect others.<sup>54</sup>

The variety of explanations show they were clearly taking a shot in the dark, hoping that at least part or one of these items might do some good. This is illustrated by what they said about the treatments that people were currently experimenting with in the fall of 1918: “Various attempts have been made to secure protection against an attack of epidemic catarrh by the inhalation of certain essential oils and by the administration of drugs such as quinine or cinnamon. All that can be said with certainty is that they do not ensure freedom from attack.”<sup>55</sup> They were not advocating these methods, but they were also not condemning their use. One interesting item from this memorandum is that the LGB advised sufferers to seek proper care, similar to the message of the 1890s. The key difference here, though, is that they were ready to supply it to those in need: “Satisfactory nursing is important in the prevention of complications and in aiding recovery from a severe attack. Sanitary Authorities have power, with the Board’s sanction, to provide nursing assistance for those who are unable to provide it for themselves.”<sup>56</sup> This shows not only a changed attitude, but also a more active role for the government.

In early November the LGB sent a memo to doctors requesting that they keep records of the cases they dealt with, and asking them to relate that information in the

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<sup>54</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 2.

<sup>55</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 5.

<sup>56</sup>*Ibid.*, 5.

future, guiding this with standardized questions such as, “Has there been any special incidence on particular occupations or districts?” and “Distribution of precautionary advice to the public. How effected?”<sup>57</sup> It included this message:

Dear Sir,

The present extremely fatal epidemic of influenza has occurred at a time when, owing to shortage of staff, it is difficult to make as complete enquiries as are desirable into its course and into any special features characterising its local incidence.

I am writing, however, to express the hope that you will be able to make such inquiries.<sup>58</sup>

On the next day, November 4<sup>th</sup>, the LGB sent yet another item to the sanitary authorities, reminding them that they were authorized to provide nursing to residents. In 1919 they went one step further by recommending that local authorities might get “Women to be enlisted as ‘home helps’ to assist with cooking, care of children and ordinary domestic work. Inquiries to be made to ascertain where such assistance is most urgently needed.”<sup>59</sup>

In November 1918 the LGB also reminded them to get the word out regarding the advice given in October, and suggested that the usefulness of closing places of public entertainment should be investigated.<sup>60</sup> Before any data could be collected on

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<sup>57</sup>The National Archives, “Epidemic Influenza,” (London, England: MH10/83, November 3, 1918), 1-2.

<sup>58</sup>Ibid., 1, and The National Archives, “Influenza Committee Correspondence with LGB and War Office,”(London, England: FD 1/535, January 3, 1919).

<sup>59</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 13.

<sup>60</sup>The National Archives, “*Circular, Sanitary Authorities. EPIDEMIC CATARRHS AND INFLUENZA,*” (London, England: MH 10/83, 1918).

this matter, in mid-November the Local Government Board issued two regulations. To do this, they used laws that had mostly been in place in the 1890s, including the Public Health Act of 1875 and the Public Health (London) Act of 1891. During the previous pandemic people had questioned whether these could be applied to influenza. These regulations pertained to “places of public entertainment,” defined “as a theatre, music hall, place for public singing, dancing, or music, place for cinematograph exhibition, or other place of entertainment or amusement, to which the public are admitted by ticket or by payment.”<sup>61</sup> The regulations called for periods of thirty minutes of closure and ventilation every three hours. They may have been based on the belief stated in the Local Government Board’s 1893 report, in which Parsons stated, “The importance of free ventilation, especially of rooms occupied by crowded assemblages of people, as a precaution against the spread of Influenza has to be pointed out.”<sup>62</sup> In that same report, Dr. Caldwell Smith said, “There is not the slightest doubt that the disease is largely spread in crowded theatres, churches, and halls, simply by personal infection. ... Free ventilation is the best preventive of Influenza.”<sup>63</sup> In 1918 some places were already taking breaks to ventilate their businesses, but the LGB did not think that was enough:

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<sup>61</sup>The National Archives, “The Public Health (Influenza) Regulations, 1918,” (London, England: MH 10/83, November 18, 1918), 2.

<sup>62</sup>Parsons, “A Further Report on the Influenza Epidemics of 1889-90, 1891, and 1891-92,” 81.

<sup>63</sup>Ibid.

Sir Auckland Geddes is aware that a number of proprietors of places of public entertainment, including those where performances of a continuous character take place, have voluntarily adopted the expedient of temporarily closing the building to the public for a short interval after the performance has proceeded for some time, for the purpose of affording an opportunity of ventilating the building but he is advised that the matter should be dealt with by general regulations.<sup>64</sup>

Some owners complained about these measures, but in general they had nothing to worry about, because the regulations were weak. For one, in accordance with the laws these were framed under they could not go into effect until the 25<sup>th</sup> of November, one week later. Secondly, they could be altered, and even eliminated, by the local authorities. The second set of regulations, issued on November 22, 1918, only slightly expanded on the previous ones by disallowing children to attend cinemas in places where schools had been closed. However, they also weakened the previous rules (in word and deed, though not in the sense of their effectiveness) by adding that cinemas only had to adopt the closure and ventilation of the premises every four hours, instead of every three.<sup>65</sup> On that same day secretary of the LGB, H.C. Monro, sent a circular to the town clerks and council clerks discussing these measures. In it, he told the localities that it would be their responsibility to administer them: "It will be the duty of the Local Authority to enforce the Regulations within their District, subject to the powers of relaxation with which they are invested by the Order containing the

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<sup>64</sup>The National Archives, H.C. Monro, "Prevention of Influenza," (London, England: MH 10-83, 1918).

<sup>65</sup>The National Archives, "The Public Health (Influenza) Regulations (No. 2), 1918," (London, England: MH10/83, 1918).

Regulations.”<sup>66</sup> These regulations were not revoked until May 6<sup>th</sup>, 1919, after the third wave was well on the wane. In this order, the LGB stated, “it is expedient that the said Regulations should be rescinded.”<sup>67</sup> One might concede that this was an active response by the government that remained in effect throughout most of the second and third waves of the 1918-1919 pandemic, but it is questionable whether these were helpful. What officials really wanted, as evidenced by some of the Medical Officer’s suggestions, was for people to stay home. Failing this, applying some rules, albeit limited ones, must have been seen as a good compromise. We can never know what inaction would have done, but it is not out of line to argue that these measures did not work. While it is impossible to quantify their effectiveness, the ineptitude of this action is illustrated by steady cinema attendance rates.<sup>68</sup> The government seemed to undermine its own call for isolation by issuing a film about influenza called “Dr. Wise.” So, the central government had much the same response to the epidemic as usual. For the most part it printed advice, and while the regulations may have been an additional action, they did not amount to much, either in the form of controls or judged on the basis of their success.

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<sup>66</sup>H.C. Monro, “Prevention of Influenza.”

<sup>67</sup>The National Archives, “General Order Recission of Public Health (Influenza) Regulations,” (London, England: MH 10/84, May 6, 1919).

<sup>68</sup>Fred R. van Hartesveldt, “Manchester,” in Fred R. van Hartesveldt, ed. *The 1918-1919 Pandemic of Influenza: The Urban Impact in the Western World* (Lewiston, NY: The Edwin Mellen Press, 1992, 99).

Various branches within the government attempted their own responses based both on what the LGB was telling them and what the preconceived ideas, what one might call the folklore, of influenza consisted of at the time. In November 1918 the London Metropolitan Police issued a memorandum. In it, they said, “In view of the recent epidemic of influenza from which the Metropolitan Police have suffered so seriously and in view of the possibility of a recrudescence of epidemics of influenza, or of pneumonia, during the winter months, it has been decided to offer inoculation to such members of the Force as desire it.”<sup>69</sup> At the time there was not a vaccination that had proven effective against the flu, nor did the government possess any secret weapon to this effect. And they did not hide this:

The Influenza Bacillus is found in many cases of the disease, but it has not been conclusively proved to be the primary infecting agent... Under the circumstances we cannot feel sure that inoculation against the influenza bacillus will prevent a man from contracting influenza. On the other hand it seems certain that the pneumonia which is such a fatal complication of influenza is due to an infection wither with the Influenza Bacillus, or with other organisms known as Pneumococci & Streptococci. A mixed vaccine prepared from these 3 organisms therefore, while possibly not protecting one from contracting influenza, may be expected to rob the disease, if contracted, of its dangers, by increasing the resistance to the known germs of pneumonia.<sup>70</sup>

In other words, they were trying a concoction of a variety of agents, hoping that one would prove effective. This action testifies to the idea that during this pandemic

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<sup>69</sup>The National Archives, “Costs to inoculate Metropolitan Police,” November 18, 1918, (London, England: MEPO 2/8586).

<sup>70</sup>Ibid.

people were willing to try whatever had the possibility of working, if not the probability. As has been shown, the same was true of the doctors. But it is difficult to say if the benefits – to the police force or to the individual – outweighed the risks: “The incapacity caused by the most severe reaction did not last for more than 72 hours, and it will be noticed that in 98% of inoculation no ill effects are felt.”<sup>71</sup> To be sure, seventy-two hours was not much of an inconvenience, but it could result in three lost workdays per person vaccinated with a substance that did not have any proven efficacy.

The Ministry of Munitions took matters into their own hands, too. Official correspondence shows that in February 1919 employee Aubrey Paureeve wrote a letter to her superior, Mr. Delanty, which stated,

The Ministry has largely prided itself on its work, much of it of a pioneer character, in connection with Health, Welfare and Recreation at National and Controlled Factories. It appears, however, to at large to have overlooked this side of the work at Headquarters where a staff of 22,000 employees amply justified active work and some expenditure which would I believe, be most remunerative in its result on output.<sup>72</sup>

The letter continues by stating that at the factories there were regulations for proper lighting and “rest rooms,” but none of this was available at headquarters. What the writer was asking for, though, were some measures to be taken during the epidemic. This request was primarily centered around

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<sup>71</sup>Ibid.

<sup>72</sup>Ibid.

the free provision and use by the staff of what is practically agreed by all Medical men to be one of the simplest and cheapest and most effective precautions – namely – washing the throat and nostrils with a weak solution of Permanganate of potash (Condy's Fluid)... [and] other obvious simple precautions, such as cleansing of telephones, regular opening of windows either inside or outside office hours.<sup>73</sup>

A response to Mr. Dulanty made by one of the staff members a few days later stated that many of these items had already been taken care of, one day before Paureeve sent the letter. Ms. Sanders described what the Ministry was doing, which included disinfecting the floors “with Jeyes fluid, every morning,” leaving the windows open every night, making quinine and Condy's fluid available for the workers, and cleaning the telephones frequently, while allowing staff members to procure a disinfectant for their own telephones.<sup>74</sup> Two days later, on February 26, this information was made widely known to the Ministry's employees through a notice.

The Ministry's Aircraft Production Department made a separate report in March 1919. It detailed the steps they had taken to prevent the disease, which included venting the rooms at lunchtime and after hours, disinfecting lifts and telephones, sending anyone who exhibited the slightest signs of the disease to the infirmary, and disinfecting the mouths of people who came into contact with the infected. In the author of the report's opinion, “we have, I am convinced, reduced the danger of infection to other members of the staff, and what is equally important, we

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<sup>73</sup>Ibid.

<sup>74</sup>Ibid.

have also reduced the severity of the disease.” She further reinforced this with the proof that “As a rule, the cases which have developed have been slight, the occurrence of pneumonia rare, and there have been no deaths among the women staff,” and “Among the men there has only been one death.”<sup>75</sup> In total there had been 297 cases amongst 1,566 women, and 89 cases out of 865 men.<sup>76</sup> This means that, considering men at this facility, the rate of incidence was only slightly higher than 10%. The death rate was less than 1 in 1000 amongst the entire group of males, and little more than 1% in the infected. Though quinine and potassium permanganate were administered, the really effective methods, in the writer’s opinion, were “adequate ventilation, prompt diagnosis, disinfection of the throat, (which is visibly affected even in the very early cases) and isolation of the patient by sending her home to bed... [which was] often done against the patient’s own wish, before she has got really ill, and very often when she has no rise of temperature.”<sup>77</sup> With the possible exception of isolating the patient and sending him or her home, these measures were really not as effective as they thought. But they at least had a positive effect on the mood of the workers. The report noted that “The prevalent opinion among the staff is that this is a mild type of Influenza.” But the writer reassured readers that “This is not so, for in the families of the staff, the disease has run its usual serious course. In one house alone, three

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<sup>75</sup>Ibid.

<sup>76</sup>Ibid.

<sup>77</sup>Ibid.

members of the family, father, mother and brother, of one of our women staff have taken Influenza and died in one week since she went home with Influenza – while in her own case the attack was slight.”<sup>78</sup> So, seemingly positive results reinforced their sense that what they were doing was adequate and right.

For the country as a whole, the local authorities – the provincial branches of the Local Government Board – were more proactive than the national government. In some ways, the responses were similar to those taken in the 1890s. In 1892 *The British Medical Journal* reported that “Handbills and posters warning people of the infectiousness of influenza are being very extensively and usefully issued by sanitary authorities.”<sup>79</sup> The government had a similar response in 1918 and 1919. In February 1919 the LGB reiterated all that they had done to educate the public. They recorded that “Practically all health authorities endeavoured to inform the public, by means of leaflets, posters, notices in the Press, lectures in the schools, etc., as to the nature and gravity of the malady, how to prevent infection, and the precautions to be observed in case of attack.”<sup>80</sup> Manchester was particularly lauded for its response in 1918 and 1919. James Niven, the Medical Officer of Health for Manchester in 1918, described in the 1920 MOH report on the pandemic how he and his staff distributed 30,000 leaflets, put up 500 large posters, and had the cooperation of the press in getting the

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<sup>78</sup>Ibid.

<sup>79</sup>“Influenza Infectious and Dangerous, but not to be Legally Dealt With,” *The British Medical Journal*, February 6, 1892, 299.

<sup>80</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 7.

message out.<sup>81</sup> He also presented a sample handbill that called for isolation of the sick, and “avoid[ing] close personal contact” with others, along with simple hygienic measures such as avoiding using “towels common to a number of persons” and destroying items dirtied by expectorate.<sup>82</sup> It also advised the public that an ambulance service was available to transport those who could not return home by their own devices. He stressed the use of masks by everyone, uncommon in Britain. He emphasized the proper cleaning of dishes and utensils and the washing of hands: “matters concerning food and drink are probably not so important as those which bring infected matters in contact with the nose, as occurs from infected towels and hands. Hence, the care of the hands is all important.”<sup>83</sup> The municipality also provided milk and coal to flu sufferers who could not procure these essential items on their own.<sup>84</sup> He even suggested some foods that would help maintain a healthy diet.<sup>85</sup> The February 1919 memorandum called his educational pamphlets “excellent.”<sup>86</sup> In the

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<sup>81</sup>Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 472.

<sup>82</sup>*Ibid.*, 480.

<sup>83</sup>*Ibid.*, 482, 485, 481, 486.

<sup>84</sup>*Ibid.*, 484.

<sup>85</sup>*Report on the Pandemic of Influenza, 1918-19*. 8.

<sup>86</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 7.

same piece they did, however, instruct against the use of masks, indirectly contradicting one of Niven's methods. They wrote,

On present knowledge the public is not advised to make a general use of face masks during a period of influenza prevalence. Face masks however should be used as much as possible by those attending on the sick. A mask to cover the nose, mouth and chin may be improvised out of three layers of butter muslin, 8 inches by 5 inches, provided at the corners with tapes for fastening at the back of the head; or about half a yard of gauze may be used for the same purpose, folded as a triangular bandage. A sufficient number of face masks must be available, so that they can be frequently changed and washed. It is desirable at the same time to protect the eyes by wearing goggles or glasses.<sup>87</sup>

The other city praised for its efforts in this memorandum was Birmingham, which, along with Manchester, also received a reprint of a pamphlet prepared by their Medical Officer, John Robertson. Shorter in length than the one from Manchester, the first paragraph accurately reported that "The germs of these diseases spread chiefly by coughing, sneezing, and near contact."<sup>88</sup> It called for isolating the sick, properly handling soiled materials, gargling with solutions and keeping warm. As a general preventative, it said "the most wholesome direction is to keep in good health by taking sufficient outdoor exercise, sleeping always with the window open, and avoiding crowded rooms or assemblies where the air is bad. Clothing should be warm, and excesses of all kinds should be avoided."<sup>89</sup> Interestingly, on December 17 *The Times* reported a decrease in deaths in both Birmingham and Manchester, along with the

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<sup>87</sup>Ibid., 5.

<sup>88</sup>Ibid., 9.

<sup>89</sup>Ibid.

statement, “The medical profession in Manchester is securing the upper hand of the ‘influenza’ epidemic in that city.”<sup>90</sup> This shows that it was not just the government patting their own backs over a job well done, but their efforts were viewed positively by laypeople too.

But while some areas had a good response, the problem with the government’s configuration in this respect was that centralization was a virtue unknown to the system. The main offices of the Local Government Board guided action and gave advice, both to the public and to their underlings. Some medical advice would be considered sound by current practitioners, while other pieces were poor, at times carrying the possibility of harming the individual’s health rather than improving it. Given the medical knowledge that existed at this time, we cannot pass judgment on this issue. What we can consider is whether more could have been done. What is important is that there were not really any central orders that called for action, other than the regulations. In 1918 some areas made influenza a notifiable disease. In Belfast, on December 14, 1918, it was reported that the Infectious Disease Act of 1889 was implemented for the flu, allowing officials to make influenza a temporarily notifiable disease through the middle of June 1919. When some suggested that the disease be made permanently notifiable, the justification for not doing so, an attempt to show the flexibility of the system, instead showed the system’s flaws. It was demonstrated that “it could be made notifiable at any time, subject to the approval of

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<sup>90</sup>*The Times*, December 17, 1918, 5.

the Local Government Board, by giving fourteen day's notice through a resolution in the City Council."<sup>91</sup> This proves that nearly three decades later people had not heeded the suggestions of the 1890s. In 1892 Sisley had said, "it is evident that the height of an epidemic is not the time to insist on the compulsory notification of influenza."<sup>92</sup> In October 1918 the LGB reached the same conclusion:

Its varied manifestations and the difficulty in securing early and decisive diagnosis, especially in the large proportion of milder cases for which medical guidance is not obtained, are serious difficulties in the way of any attempt to enforce compulsory notification of Influenza; and this cannot be recommended under present circumstances as likely to be of practical use.<sup>93</sup>

Right before the third wave erupted in Britain, a lecture at the Royal Institute of Health on January 29<sup>th</sup>, 1919, showed that people in the government were already thinking about what else needed to be done. Captain Carnwath, the Local Government Board's medical inspector, said "Some system of notification was required."<sup>94</sup> But in the memorandum issued by the Local Government Board notification was still deemed unhelpful. Regarding this measure, it said,

The question of making influenza notifiable was carefully considered by many medical officers of health, as also in the official Memorandum issued by the Board. Though from the statistical point of view information would have been gained from notification, the general view appears to

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<sup>91</sup>"Notification of Influenza in Belfast," *The Lancet*, December 14, 1918, 828.

<sup>92</sup>Sisley, "A Study of Influenza; and the Laws of England Concerning Infectious Diseases," 170.

<sup>93</sup>"MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA," 4.

<sup>94</sup>"Lessons of the Influenza Epidemic," *The Lancet*, February 8, 1919, 242.

have been that the benefits likely to be derived from the point of view of control of the disease scarcely justified its adoption. No doubt also the depletion of staffs made local authorities reluctant to adopt a measure which involved much additional work without the promise of commensurate beneficial results.<sup>95</sup>

The debate over notification was not confined to Britain, as some countries such as Australia adopted it (without total success), and practitioners in other countries (like South Africa) argued for its enactment. Nor did it end in 1919. In an article that appeared in *The Lancet* on March 2, 1929, titled “The Prevention of Influenza,” the author claimed, “there is no evidence that in large communities the notification and isolation of patients has had any appreciable effect on the total incidence of influenza.” He continued to say, “notification and isolation of cases, even if machinery were available, would be unlikely to affect the general morbidity appreciably.”<sup>96</sup> This article is interesting because it shows that though it had not gained any ground, the issue of notification had survived a decade after the pandemic. Perhaps those government officials who decided it was not pragmatic were vindicated.

Other measures were similarly considered, but it is clear that officials preferred to be cautious about something they knew little about. Replying to Sir Kingsley Wood in the Commons on February 24<sup>th</sup>, 1919, Major Astor said, “It is possible that influenza may be spread by handling articles of food and drink, but it does not seem

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<sup>95</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 9-10.

<sup>96</sup>“The Prevention of Influenza,” *The Lancet*, March 2, 1929, 451.

practicable to remove this risk by legislative action.”<sup>97</sup> But the people wanted action. In the midst of the third wave, a writer for *The Times* remarked, “We are ready to suffer much immediate inconvenience for the sake of the national well-being.”<sup>98</sup> This sentiment was not new. In October 1918, during the deadly second wave, *The Times* had said, “inconvenience will be borne gladly enough if by that means the scourge can be stamped out, or at least brought under a greater measure of control.”<sup>99</sup> The day before, a letter to the editor by University College London doctor W.J. Simpson severely criticized the government. He began by saying,

The leading article in *The Times* of October 23 raises some very important questions as to the power of our public health organization in its present form of dealing effectually with serious epidemics in this country and which the war is likely to bring in its train... the Government should make a definite statement regarding the nature of the epidemic which is now prevailing.<sup>100</sup>

He wanted a ruling on whether the disease was influenza, and influenza alone. But the Local Government Board had already made their statement in the memorandum issued on the 22<sup>nd</sup> of that month. In it, they said “The real difficulty is that of defining Influenza... it is impossible to set up an unerring bacteriological test for Influenza; and its clinical symptoms are so multiform as not to permit of a differential clinical

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<sup>97</sup>“Influenza,” *The Lancet*, March 1, 1919, 360.

<sup>98</sup>*The Times*, February 24, 1919, 8.

<sup>99</sup>*The Times*, October 26, 1918, 7.

<sup>100</sup>W.J. Simpson, *The Times*, October 25, 1918, 4.

diagnosis in all cases.”<sup>101</sup> Other diseases that typically coincided with influenza pandemics were listed as well, but there was not enough information to make the types of definitive statements that this physician was calling for. Doctors like Simpson weren’t the only ones complaining about government inaction. An article in *The Times* carried this memorable quote,

It would have been better to lock the stable door before the escape of the horse. If this advice is likely to have any good effect, its chances of achieving its purpose would have been enhanced had it been published at the beginning instead of in the middle of the outbreak. Nor are we disposed to accept the excuse that no one could have foreseen the extent of the present epidemic or the rapid character of its advance. Influenza was very prevalent last summer, and had the experience of the eighties been called to mind it would have been evident that a summer epidemic was likely to be followed by a winter one of greater severity. The Local Government Board had thus ample grounds for anxiety a month, even two months, ago.<sup>102</sup>

The agenda of this article was contained inconspicuously in its last line: “The need for a Ministry of Health to protect the public in matters of this kind has never received a more forcible illustration.”<sup>103</sup> The influenza pandemic was not only a crisis affecting the nation’s health, it was also becoming a crisis for the government bodies charged with dealing with it.

It was not unusual for influenza epidemics to get wrapped up in political matters. In December 1889 *The Spectator* hoped that enough people in the “Irish

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<sup>101</sup>“MEMORANDUM ON EPIDEMIC CATARRHS AND INFLUENZA,” 2-3.

<sup>102</sup>*The Times*, October 23, 1918, 7.

<sup>103</sup>*Ibid.*

Party” would come down with the disease so that Parliament could pass some useful laws. The writer said, “After all, even the influenza has its bright side. For a week at least it will force Home-rule out of sight, and may even postpone the outbreak of a far more virulent epidemic than itself, the currency controversy.”<sup>104</sup> Another writer reminded readers not to act hastily. In January 1892 Dr. F. Orton, in a letter to the editor of *The Times*, said, “I fancy the Local Government Board may well afford to smile at the taunts lately levelled at them for not stopping the spread of the present epidemic, considering that people on board ships in mid-ocean are smitten down by it. The faculty as a body is just now being fairly well abused, while medical men as individuals are being received with open arms.”<sup>105</sup> He urged his contemporaries to maintain their composure: “Epidemics like this are apt to develop hysterical fears and fancies, which, unfortunately, lead to wrong action.”<sup>106</sup> Whether adequate or not, the epidemics became an effective tool for those calling on government reform, which inserted itself into the debate over a need for a new body, the Ministry of Health. The debate over a new Ministry to deal with matters of health predated even the earliest signs of the 1918-1919 pandemic by over a year, the original bill having been introduced in Parliament in the middle of January 1917. Dr. Christopher Addison, who would become the first Minister of Health, was Minister of Munitions when he

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<sup>104</sup>*The Spectator*, December 28, 1889, 919.

<sup>105</sup>*The Times*, January 26, 1892, 6.

<sup>106</sup>*Ibid.*

helped introduce the measure. In his memoirs, he recounted his belief in the need for this new type of body:

The application of medical knowledge, in so far as it could be applied only through public agency, was lagging grievously behind the advance of knowledge. If that knowledge was to be applied, as it could be, to the improvement of national health and to the prevention of sickness, it necessitated the gathering together into one directing agency of that medley of health services which was scattered throughout Government departments; the Board of Trade, the Home Office, the Privy Council and the Insurance Commission apart from the main Health Department at the Local Government Board.<sup>107</sup>

He believed that the management of the nation's health was dispersed amongst too many bodies, and for him the war had driven this point home: "The conditions which had developed during the war had immensely strengthened the considerations which were in existence before it occurred."<sup>108</sup> It is unclear how much of a role the pandemic played in securing the passage of the new Ministry, but it was not the first time that this issue had arisen during an influenza pandemic. In 1892 Sisley had said,

if we assume that members of vestries and county councillors are always led to their decisions by considerations of the public interest, we are also compelled to admit that they are not always skilled in sanitary matters, and unless and until this is the case it is to be feared that the results of their deliberations will not always be ideal ones... it must be evident that the present laws are not perfectly adapted to the circumstances in which we now find ourselves placed, nor is much improvement in this respect to be

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<sup>107</sup>Rt. Hon. Christopher Addison. *Politics From Within: 1911-1918*, Volume II (London: Herbert Jenkins Limited, 1924), 221.

<sup>108</sup>Ibid.

hoped for until the Sanitary Service is consolidated and become one fold under one shepherd – a Minister of Public Health.<sup>109</sup>

Some may argue that, coming near the end of the battle over the bill, the role of the disease in 1918 and 1919 was minimal. But it may have been the necessary pressure required to tip those holding out. Addison said that procuring this new Ministry “was, in short, the struggle of the old Local Government Board with its old parochial disposition against an inevitable and much-needed development.”<sup>110</sup> He fervently believed that the public supported this change. With the majority in their favor; “The difficulty had not been with people outside: it had been purely internal. There was no discordant or hostile criticism in the House of Commons or in the Press.”<sup>111</sup> Despite his positive recollection, it had been a difficult battle which must have seemed insurmountable at times. In November 1917 the journal *Nature* noted: “The difficulties with which it is attended, mainly because of the number of departments and interests that are involved, render it almost hopeless to expect that a solution will be found if only the methods regarded as constitutional are available.”<sup>112</sup> The system that was in place had been established and functioning for years. It had been built through

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<sup>109</sup>Sisley, “A Study of Influenza; and the Laws of England Concerning Infectious Diseases,” 170.

<sup>110</sup>Addison, 221.

<sup>111</sup>*Ibid.*, 230.

<sup>112</sup>“The Proposed Ministry of Health,” *Nature*, November 8, 1917 (No. 2506, Vol. 100), 188.

precedent. The constant attention the Ministry of Health Bill was given in the press and in journals was not needed to sway support towards its passage. What they needed, instead, was for the hardliners of the old system to surrender.

The influenza pandemic was fortuitous for the supporters of the new Ministry. One article in *The Times* lambasted the LGB: “But though the medical profession still stumbles on the threshold of the larger knowledge, the fault in this country lies chiefly with the nation and the Government.”<sup>113</sup> It continued by saying,

We pride ourselves upon our progressive civilization, and yet those in high place refuse to create that most paramount of necessities – a Ministry of Health. Had there been such a Ministry the visitation from which we are suffering to-day might not have found us absolutely unprepared... No warnings were issued, no watch was kept, no adequate steps were taken.<sup>114</sup>

This was probably mostly propagandistic, and at best misguided, for no one could have warned about what would happen. That was the story according to authorities, too. As the Local Government Board defended its actions in Parliament, *The Times* continued its attack. “The truth is that until the epidemic became really alarming little or nothing was attempted by the authorities. It is now too late to take extensive measures of prevention,” a correspondent wrote, even going as far as claiming that the LGB’s further actions were based on an article that appeared the day before, quoted at

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<sup>113</sup>“The Mystery of Influenza,” *The Times*, October 28, 1918, 7.

<sup>114</sup>*Ibid.*

the beginning of the paragraph.<sup>115</sup> The next day, another statement appeared: “The public must not allow the Ministry of Health to be defeated by vested interests of any kind, and the closest possible watch should be kept.”<sup>116</sup> Other flaws in the system were reported. Sir Kingsley Wood, giving a lecture, pointed out the lack of teamwork in the government’s administration of medicine, and also remarked that the health system was fifty years old, implying that it was not modernized.<sup>117</sup>

The debate was found in the scientific and medical journals as well, but it took a different form there. While supportive of the change, the journals tried to distance it from the epidemic. In early November, 1918, *The Lancet* tried to make this clear by saying,

A natural desire to blame somebody has resulted in an attack upon the Local Government Board for having failed to arrest the development of the epidemic. Furthermore, it is suggested that had a Ministry of Health been in existence there would have been no epidemic at the present time, or, at least, it would never have been allowed to develop. We are in entire accord with those who desire the formation of a Ministry of Health, but we deprecate regarding it as a panacea for all epidemic evils.<sup>118</sup>

The journal *Nature* carried a similar idea: “If some of the speakers and writers are to be believed, the Board, because its methods are ‘wooden,’ or because of its ‘Poor Law taint,’ is mainly to blame for the epidemic: if there had been a Ministry in existence, the

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<sup>115</sup>*The Times*, October 29, 1918, 7.

<sup>116</sup>*Ibid.*

<sup>117</sup>*The Times*, November 7, 1918, 3.

<sup>118</sup>“The Influenza Epidemic,” *The Lancet* November 2, 1918, 595.

suggestion is that there most certainly would have been no outbreak.”<sup>119</sup> These journals were not defenders of the Local Government Board by any means. An article in *Nature* in April 1918 had much to say on the issue, including the criticism that “Certainly at the present day there is much in our public health administration which calls for censure rather than for praise.”<sup>120</sup> In a January 1917 speech Dr. Edmund Cautley lamented the nature of government involvement in the field of medicine. His argument was that state interference in the profession had proceeded along negative lines, often ignoring the opinion of those who practiced it. He said,

Under the Public Health Act of 1875 urban and rural sanitary districts were formed. Medical officers of health were appointed in charge of these districts... Since then the medical officer of health, though often underpaid, has developed into a being of imposing power and authority, under the aegis of the Local Government Board... He is no longer a medical man; he has sloughed his skin and unfortunately has become a department official, to whom the interests of the profession are only of minor importance.<sup>121</sup>

These journals favored change. A *Nature* article said, “the proposal to form a Ministry of Health is highly satisfactory.”<sup>122</sup> But, it seems, they wanted to keep their readers

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<sup>119</sup>“The Ministry of Health Bill and After,” *Nature* November 7, 1918 (no. 2558 vol. 102), 186.

<sup>120</sup>“A Ministry of Health,” *Nature* April 18, 1918, (No. 2529, Vol. 101), 121.

<sup>121</sup>Edmund Cautley, M.D., “Presidential Address on the State Octopus and the Medical Profession,” *The Lancet* January 13, 1917, 51.

<sup>122</sup>“A Ministry of Health,” *Nature* April 18, 1918, 121.

grounded in reality. Perhaps they feared another outbreak might discredit a newly established governmental body.

The question remains about whether the government could have done anything additional to alleviate the effects of the disease. This was not the first time that people had asked for more. In January 1892 *The Spectator* had asked Parliament to establish a commission to investigate the best way to prevent the disease, if for no other reason than self-interest. The writer reminded them that it was in their interest to do so, “Whatever the mysterious ‘influence’ is, whether poisoned air or flights of new animalcules, or a descent from high strata of the atmosphere of clouds of gaseous particles originally thrown out in some volcanic explosion, the Members of the House will all be exposed to it alike; they all sit under a cloud of each other’s breath, and they are nearly all persons advanced in years, with some weak point or other in their constitutions.”<sup>123</sup> In January 1892 the President of the Royal College of Physicians was in talks with the President of the Local Government Board to procure funds for a Royal Commission on influenza. *The British Medical Journal* was worried about this, though, because “funds are rarely forthcoming with the same readiness for investigation of the diseases of human beings as for those of agricultural stock.”<sup>124</sup> It seems that officials were aware of the outcry. Even before the 1918-1919 pandemic

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<sup>123</sup>“The Influenza,” *The Spectator*, January 16, 1892, 82.

<sup>124</sup>“Royal Commission on Influenza,” *The British Medical Journal*, January 30, 1892, 238-239.

was over officials who had decided policy in its earlier stages were defending their actions. Sir Arthur Newsholme, former president of the Local Government Board,

said that the non-preventability of influenza had been cast as a reflection on preventive medicine, but that was answered by pointing to its triumphs over such diseases as typhoid fever, malaria, typhus, small-pox, &c. In the case of influenza we were waiting for further research to enable us in some way or another to secure immunity of attack.<sup>125</sup>

This, he said, could take decades. Instead, what they needed was to “raise the standard of conduct of the ordinary man or woman whom one met in the tram or tube or in other places, especially with regard to sneezing and other insanitary habits.”<sup>126</sup>

Was placing the blame on the individual, or on society’s manners, just an excuse for a job poorly done? In the February 1919 memorandum it stated,

Research into the causation of influenza, into its spread in epidemic form, into its pathology, and into its remedy, has during the last six months been energetically pursued by many workers of our own and other countries. Steps have been taken by this Department to keep as fully informed as possible of its general results and to participate in epidemiological inquiries. Such investigations, however keenly pursued, and however many the workers, require time and patience if trustworthy results are to be obtained. As yet we do not know the nature of the living virus to which influenza is due.<sup>127</sup>

The message here was simple – ‘we have diligently done and are presently doing our part, but this is a particularly difficult case.’

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<sup>125</sup>*The Lancet*, “Lessons of the Influenza Epidemic,” February 8, 1919, 242.

<sup>126</sup>*Ibid.*

<sup>127</sup>“MEMORANDUM ON PREVENTION OF INFLUENZA,” 2.

No one can definitively pass judgment on the issue, but it seems that the actions taken were sufficient given the nature of influenza and the knowledge of the disease at the time. Memoranda were published and distributed to the proper authorities, and while these were in general responsible for getting the message to the public, and while some (such as the medical officer in Manchester) were more prolific than their colleagues, there were other ways to get this information. One was through the informational film issued by the government. Another was through the press, which often published in paraphrase or in full the government issued documents, and distributed their own information as well. Though overworked and understaffed, the public also made heavy use of the medical profession. To find what contemporaries in the know thought about the government's efforts, one can examine the scientific journals. Writing from a medical standpoint, the contributors to *The Lancet* were well apprised of the situation. One writer said, "The problem of how to limit the spread when it has gained a hold upon the country is a very difficult one."<sup>128</sup> He also said that the "contributing factors to the spread of the epidemic... must be as well known to the public as to the medical profession."<sup>129</sup> Knowledge of the disease had not markedly changed. Even if the government had not told anyone, medical practitioners or the public, about the disease, the accumulated knowledge of it, including those things learned in the 1890s, still held true at the time. But that was not the problem, at least

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<sup>128</sup>"The Influenza Epidemic," *The Lancet* November 2, 1918, 596.

<sup>129</sup>*Ibid.*

according to this writer. The real issue, he claimed, was that the advice given went unheeded by the people: “To congregate and brood is too much the public attitude.”<sup>130</sup> It was impossible to legislate manners. The writers of the 1920 MOH report stated, “But when the pendulum swings always close to the danger limit, we shall not receive the warning, we shall always live in the shadow of a possible disaster. Our position in face of influenza will be that of the 17<sup>th</sup> century physician in regard to plague, the exclusion of infection from our shores, not even in specific immunisation, but in the more laborious and less dramatic task of attending to the general principles of hygiene.”<sup>131</sup> It was also impossible to control this disease. An article in *Nature* written around the same time shared some of these feelings. A Ministry of Health, it said, “will not necessarily bring improvement in the national health; will not necessarily, as many appear to think, bring about a total disappearance of epidemics and a vast and immediate reduction in the amount of disease and the annual death-rate.”<sup>132</sup> Even while the Ministry of Health was being formed some questioned whether the situation would be any different. Lovell Drage, who had been a medical officer of health for thirty years, wrote to the editor of *The Lancet*, saying, “There is no guarantee that when health matters become more centralised and under political

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<sup>130</sup>Ibid., 595.

<sup>131</sup>*Report on the Pandemic of Influenza 1918-19*. 30.

<sup>132</sup>“The Ministry of Health Bill and After,” *Nature* November 7, 1918 (no. 2558 vol. 102), 187.

control the presence of politics will not again interfere with important safeguards against disease.”<sup>133</sup> With these statements, and the absence of contradictory criticism, it seems that they believed the government had made a satisfactory effort.

But what about those who complained that there was not a proper warning given to the country, such as the writer for *The Times* who made reference to the “stable door”? In major crises there are always those who, with hindsight, criticize the action of those in charge. But the lens of hindsight distorts. An article appeared in *The Times* on November 6, 1918, with the headline “Epidemic Foretold – Official Warning Last August.” It was in reference to a report compiled by the Medical Research Committee that was published in *The British Medical Journal* of August 10, 1918. For some, this article showed that officials had known when the next outbreak was going to occur. *The Times* argued that this showed clear culpability:

Thus the idea that the epidemic could not have been foreseen is finally disposed of. It was foreseen, and that by a very important official body, which actually drew the attention of the health authorities to the danger. The claim that adequate steps to meet it were not made cannot, therefore, be disputed on the ground that no warning was given.<sup>134</sup>

But those in the medical community were quick to respond to these charges. Major Greenwood wrote to the editors of *The Lancet* in November, saying,

We might indeed have hoped that the precedent of 1890 would be followed and a year skipped, but we could not be sure that the 1891 example might not be adopted when we should be faced by a serious

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<sup>133</sup>Lovell Drage, “The Ministry of Health,” *The Lancet* February 15, 1919, 281.

<sup>134</sup>*The Times*, November 6, 1918, 3.

mortality. This is just what happened. To have stated in August that it was bound to happen would have argued ignorance of the earlier history; to say that it was very likely to happen and to concert measures for systematically studying the course and alleviating the inconvenience, was plainly the correct procedure.<sup>135</sup>

In an article in *The Lancet*, Sir Arthur Newsholme said “influenza during this year has followed a course never previously experienced.”<sup>136</sup> He continued his answer to critics by saying, “No such forecast... was made, and it would have been a foolishly wild guess, inasmuch as the present secondary wave occurred more than twice as early as any previous ‘secondary wave’ recorded in the history of the metropolis.” He cited another Medical Research Committee statement, made October 1, 1918, which argued that a second wave would occur “in a few months,” even though it was only days away.<sup>137</sup> In a private letter from Sir Walter Fletcher to Dr. Richard Reece of the War Office, Fletcher stated that when he had said another epidemic would strike, he was simply referencing past experience:

As to our ‘prophesying’ a secondary wave this autumn, this was based on bacteriological descriptions collected by British and Foreign workers, which suggested close similarity between this pandemic and that of 1889-90. Turning to that past experience, it showed a primary outbreak very quick in rise and decline in winter of 1889-92 and later. These secondary waves lasted longer, but were much more fatal in pneumonic complications. Observations made this year in England on two large homogeneous groups showed striking similarity in the form of the

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<sup>135</sup>Major Greenwood, *The Lancet*, November 9, 1918, 644.

<sup>136</sup>Sir Arthur Newsholme, “Introductory Remarks on Epidemic Catarrhs and Influenza,” *The Lancet* November 23, 1918, 691.

<sup>137</sup>*Ibid.*, 692.

epidemic wave of the last spring with that of the first wave, 1889-90. It was natural to expect secondary waves with great confidence, and as the primary wave this time came in the early summer, it was not a very bold guess that the secondary wave, with its dangerous pneumonias, would come with the approach of winter. Perhaps it is always foolish to prophesy, but luckily it never looks so foolish after a prophecy has been fulfilled. At all events it seemed better to us to be on the right side and get ready for a secondary wave, whether it came early or late.<sup>138</sup>

When the Royal College of Physicians issued their “Memorandum on Influenza” in November 1918, they included this line: “The long intermission since the last wide-spread epidemic had already made an early reappearance probable, but the conditions of epidemic prevalence of influenza are too obscure to allow of precise prediction.”<sup>139</sup> They had no way of knowing when the next visitation would hit, or how much damage it would do. *Nature* had carried a similar sentiment in late October:

It has recently been stated that the epidemic occurrence of influenza in July should have furnished warning of the present autumnal epidemic. Those who put forward this statement have not made themselves acquainted with our national experience of influenza. In actual fact no previous known epidemic of influenza in this country... has recurred within three months of a previous epidemic.<sup>140</sup>

This was challenged in *The Lancet* on November 9, 1918, by Major Greenwood, who said that there were examples of secondary waves that fell within three months, but it

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<sup>138</sup>“Influenza Committee Correspondence with LGB and War Office.”

<sup>139</sup>The National Archives, “Royal College of Physicians Memorandum on Influenza,” November 1918 (London, England: MH 10/83), 1.

<sup>140</sup>“Epidemic Catarrhs and Influenza,” *Nature* October 31, 1918, 168.

is nonetheless clear that people felt strongly that no warning was available.<sup>141</sup>

Newsholme went even further, saying that even if there had been a warning, what could they have done? “Warnings of possible ‘secondary waves’... would be useful if a prophylactic were available... or, if by issuing advice the progress of an epidemic could be stayed. Neither of these conditions can be fulfilled. We are at present unable to prevent the spread of influenza,” he wrote.<sup>142</sup> We can absolve the government in this area.

Current authors have commented that wartime censorship tainted the public’s perceptions of the 1918-19 flu pandemic because it shielded them from all kinds of information. Even the popular name, they claim, of “Spanish Influenza,” was derived from the amount of information that Spain, a neutral country and free of wartime censorship, allowed in their newspapers. In actuality, wartime censorship in Britain played little part in the domestic attitudes towards the flu. Early in the war, in August 1914, the British government established the Defence of the Realm Act. As part of a broad program to regulate actions during the war, the Defence of the Realm Act also included censorship restrictions, which “made it an offence... to publish information ‘of such a nature as is calculated to be or might be directly or indirectly useful to the

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<sup>141</sup>Major Greenwood, *The Lancet*, November 9, 1918, 643-4.

<sup>142</sup>Newsholme, 692.

enemy’.”<sup>143</sup> For the press, “it was just as important to prevent the publication at home of ‘true or false information which might exercise a prejudicial effect on the civil population’.”<sup>144</sup> In October of the same year, the head of the Press Bureau, Sir Stanley Buckmaster, issued a memorandum to his censors calling for them to stop “news likely to cause needless alarm and distress among the civil population.”<sup>145</sup> The government was backed by the power of the law, but in reality “proceedings were only rarely and reluctantly instituted against newspapers.”<sup>146</sup> One author goes as far to say that, “for the most part, the government refrained from suppressing even the radical papers.”<sup>147</sup> Instead, the government found a willing and able ally in publishers, who often practiced self-censorship.

The reason that influenza did not receive more press coverage in Britain, at least initially, is that it was unremarkable. However, some might contend that an unusual disease is always noteworthy, regardless of a low number of deaths, and thus the argument that censorship hindered reports might still remain. Censorship concerning the disease was not that strong, though, because influenza articles

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<sup>143</sup>Michael Sanders and Philip M. Taylor, *British Propaganda During the First World War 1914-1918* (London: Macmillan, 1982), 9.

<sup>144</sup>*Ibid.*, 19.

<sup>145</sup>Tania Rose, *Aspects of Political Censorship 1914-1918* (Hull: University of Hull Press, 1995), 17.

<sup>146</sup>*Ibid.*, 19.

<sup>147</sup>George Robb, *British Culture and the First World War* (New York: Palgrave, 2002), 112.

concerning the soldiers and war production were published in the summer and the fall, while the war was still going on. On July 3<sup>rd</sup> *The Times* published an article titled “Influenza Victims – Work Hindered in Mine and Factory.” In it the writer states, “The munition factories and ironworks in Birmingham and district are seriously affected by the epidemic.”<sup>148</sup> A July 5<sup>th</sup> article said that in Monmouthshire, “Men are being taken out of the pits on ambulances, and the output of works is seriously affected.”<sup>149</sup> On July 8<sup>th</sup> it was reported that one-third of all coal miners in the Wigan area were ill.<sup>150</sup> On October 19, another article said, “Twenty-five per cent. of the staff of the Priority Department of the Ministry of Munitions were absent yesterday and it is feared that this will inevitably occasion some delay in dealing with the many applications addressed to the Department.”<sup>151</sup> All of these were potentially vital to the war, and this information may have been useful to the enemy, and yet these items were not censored. Perhaps more important, though, were actual reports of soldiers. According to an article in *The Daily News* from October 9<sup>th</sup>, 1918, “Over 100 soldiers suffering from influenza are in hospital at Northampton.”<sup>152</sup> While the numbers presented in this were, admittedly, low and thus perhaps did not relay much

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<sup>148</sup>*The Times*, July 3, 1918, 3.

<sup>149</sup>*Ibid.*, July 5, 1918, 3.

<sup>150</sup>*Ibid.*, July 8, 1918, 5.

<sup>151</sup>*Ibid.*, October 19, 1918, 3.

<sup>152</sup>*The Daily News*, October 9, 1918, 3.

information, it still provided some insight into the situation, which ultimately could have been extrapolated towards the logical step that other soldiers were affected in like numbers. The censors may have been kept at bay by the realization that the entire world was suffering from the disease. There were plenty of reports from abroad, including occasional ones from Germany, even while the war continued. If workers and soldiers were ill in Britain, then, it would only have been reasonable for them to conclude that they were stricken in Germany too.

But what about the information the people were receiving? For instance, was the most accurate advice relayed to the public effectively? The problem is that there was a lack of consensus among researchers, practitioners, and officials over all aspects of the disease, including its nature, composition, and the ways in which to deal with it. This is partly why government action could vary across municipalities; why some areas closed their schools while others preferred to keep them open. They did not have proper data about the disease, and thus *could not* devise a uniform plan. Some even believed that the world was dealing with an entirely new disease. This also attests to why advice was so broad, and why the recommendations were many. The virus of influenza was not isolated until 1933, and successful inoculations were not achieved until the 1940s. They were far from either of these in 1918 and 1919.

As the debates and the disease continued, the government did what they could. Services continued unabated. In the 1890s Mr. R.C. Tombs of the London Postal Service said, “The fact that in spite of the very large number of absences the work was

carried out with little alteration from the usual lines is a proof both of the amount of elasticity possessed by the staff arrangements, and of the general willingness of the force to meet an emergency... very few complaints were received from the public during the whole time.”<sup>153</sup> Releasing informational memoranda, pamphlets, notices, and, in the latter pandemic, a film, might not seem like much (though some localities did do more), but there was little more that they could meaningfully do. In November 1918, the LGB sent a memo to sanitary authorities saying, “they [were] glad to learn that in areas where influenza is prevalent steps have already been taken by means of leaflets, notices in the Press and otherwise, to direct the attention of the public to the precautionary measures which are set out in the Memorandum for preventing the spread of the disease.”<sup>154</sup> Considering the comparatively low level of government involvement in citizens’ lives at the time, we should probably not expect them to have done more. The welfare state was in its infancy. And, at least for much of the first and second waves, a substantial amount of the focus of government was given to the war. Writing to Sir Arthur Newsholme in October 1918, one man expressed his belief that the war was hampering their ability to combat disease, especially influenza and pneumonia. He said,

Our difficulty in providing proper intensive work is wholly due to the fact that the Army have taken practically all the men to whom we should be

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<sup>153</sup>Parsons, *Report on the Influenza Epidemic of 1889-90*, 184.

<sup>154</sup>“*Circular, Sanitary Authorities. EPIDEMIC CATARRHS AND INFLUENZA.*”

looking now. Many of them were taken in spite of our protests, and, as you know, many of them have been used for work for which they were not best fitted... The Army is itself now paying the penalty. Men they took away from what a year or two ago they thought of as ‘academic research’ might by this time have done work of the first practical importance to the Army as such to-day... many months ago (indeed since 1916, when pneumonia nearly killed me and I was treated by mediaeval methods), I tried to get some men out of Army clutches for this, and I am still trying.<sup>155</sup>

Demobilizing medical men and women was a tough task, as they found out in 1919, when they were still needed domestically for the third wave. Perhaps the soundest advice was that which was concerned with manners and hygiene, but changing habits could not be implemented overnight. The same is illustrated by the failure to do this in the 1890s. In February 1892, Dr. Henry Laelt, Medical Officer of Health for Wolverhampton, said, “I do not consider sanitary authorities can do anything. I believe the spread of the disease has been largely due to gross disregard of the infectiveness of patients and friends.”<sup>156</sup>

In 1920 Dr. James Cantlie delivered a sermon at St. Peter’s on Verne Street in London. He said, “It is as old as the world, this fight against disease, and will go on for all time.”<sup>157</sup> His message was centered around personal action. It was loosely based on the parable of the “Good Samaritan,” which he made reference to. In this

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<sup>155</sup>“Influenza Committee Correspondence with LGB and War Office.”

<sup>156</sup>“The Influenza Epidemic,” *The British Medical Journal*, February 20, 1892, 408.

<sup>157</sup>Wellcome Library, “James Cantlie Sermon,” (London, England: MS 7938/16, 1920).

parable Jesus describes a man who was accosted and brutally beaten by robbers. Two people pass him by, but the third,

a certain Samaritan, as he journeyed, came where he was: and when he saw him, he had compassion on him, and went to him, and bound up his wounds, pouring in oil and wine, and set him on his own beast, and brought him to an inn, and took care of him. And on the morrow when he departed, he took out two pence, and gave them to the host, and said unto him, Take care of him; and whatsoever thou spendest more, when I come again, I will repay thee.<sup>158</sup>

Cantlie told his listeners to help out others by subscribing to a hospital fund and learning first aid. The change, he said, did not need to come through the government. The hospitals should stay the same, and doctors should remain unpaid by the government. This was his charge: “In the Army we have a front line, or zone of danger: so in civil life, we have our front line, in our streets and factories... This front line is looked after by whom? By the doctors? No. By the nurses? No. Then by whom? By you; very largely the public is expected to do that.”<sup>159</sup> It was clear what he meant. The individual, and not the state – the MOH or anyone else, should be the protectors of society in a time of rampant disease.

What might silence critics who claim that the government responded inadequately is the realization that, nearly nine decades later, we are no better prepared for an influenza pandemic. If one is ever to strike again, there is little more that a

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<sup>158</sup>Luke 10:33-35 (New American Standard Version).

<sup>159</sup>“James Cantlie Sermon.”

modern government could or would do than what was available to those in 1918. And the current government reports call for the same thing: personal action.

## Conclusion

When current authors write of the 1918-19 pandemic they often recount the story of a multi-stage, singular and isolated event that provides important parallels for the present. But by doing this they fail to portray it in its proper setting, as this pandemic, and every historical event, is unique in its own right. Authors often examine the early 20<sup>th</sup> century medical profession in reference to the present day, though the situation today is different from the one that the world faced in 1918, and people need to be reminded of the specifics of time and place. For instance, presently many countries have central agencies to monitor diseases, and since the middle of the 20<sup>th</sup> century there has been an international monitoring system specifically for the flu (FluNet). As much as recent commentators would like us to believe, history cannot predict if and when the next pandemic will strike, nor how it will affect daily life. Those who lived through these pandemics learned this lesson, and it is a message that needs to be reiterated to the current generation. Unfortunately, this is something that in the best cases has only been partly understood. Though cautious about the specifics, in the United Kingdom's current preparedness plan the authors state that "Where possible, assumptions for models derive from data from previous pandemics."<sup>1</sup> Using previous pandemics as a gauge has not only found a place in government

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<sup>1</sup>Department of Health, *Pandemic Flu – A national framework for responding to an influenza pandemic* (London: November, 2007), 5.

reports, but has also been heavily used in scholarly and popular works. Writing about ten years ago on the subject of influenza pandemics, one author stated, “the interval between pandemics in the period from 1700 to 1889 is 50-60 years and for the period since 1889 is 10-40 years; the interval may therefore be shortening, and if more recent experience is to be a guide, the next pandemic will be before 2008 counting from 1968, or 2017 if the pandemic of 1977 is accepted.”<sup>2</sup> In the most recent bestseller about the 1918-1919 pandemic, John Barry’s *The Great Influenza*, he writes, “the likelihood and potential danger of another influenza pandemic... is not reassuring. Every expert on influenza agrees that the ability of the influenza virus to reassort genes means that another pandemic not only can happen. It almost certainly will happen.”<sup>3</sup> This issue of inevitability permeates most written work on flu pandemics. The World Health Organization (WHO) agrees: “the world has been warned in advance. For more than a year, conditions favouring another pandemic have been unfolding in parts of Asia.”<sup>4</sup> Do conditions really constitute a warning? The same “warning” has always existed – there has always been the possibility of an influenza pandemic because there have been influenza pandemics. This was no less true in 1889 than it is today.

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<sup>2</sup>Christopher W. Potter, “Chronicle of Influenza Pandemics,” in *Textbook of Influenza*, ed. Karl G. Nicholson, et. al (Oxford: Blackwell, 1998), 17.

<sup>3</sup>John M. Barry, *The Great Influenza* (New York: Viking, 2004), 449.

<sup>4</sup>World Health Organization, “Responding to the avian influenza pandemic threat: Recommended strategic actions,” *Communicable Disease Surveillance and Response Global Influenza Programme*, (WHO/CDS/CSR/GIP/2005.8, 2005), 2.

Predictions like these are foolish. Influenza is a microscopic organism that changes its composition (through mutation) at random instances. There is no way to predict its recurrence based on the historical record. The pandemics examined here did not follow a pattern. As far as Britain was concerned, there were certainly three waves in each. But each wave began at different times of the year, and they were separated by intervals of different lengths. This lack of regularity frustrated those who lived through the pandemics. In 1929 Major Greenwood wrote an article that examined two pieces written at the beginning of the decade that focused on providing an explanation for when the next epidemic would strike. One, by Dr. John Brownlee, stated that 33 weeks passed between epidemics. The other, by Mr. B.E. Spear, used a complex mathematical equation to prove that they came approximately every 52 weeks.<sup>5</sup> Dr. C. O. Stallybrass partly confirmed Brownlee's 33 weeks, as the minimum time required, with findings from Liverpool, but Stallybrass stated that it might take as long as ten years for an epidemic to appear.<sup>6</sup> Brownlee and Stallybrass used history, while Spear used math, and all were wrong. Greenwood was concerned that, given the blatant inaccuracy of the theories, people still took them seriously: "an editorial writer in *The Times* warmly praised Brownlee's discovery and sometimes reproved those who had not taken it very seriously. In the second place, Mr Spear, who had

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<sup>5</sup>Major Greenwood, "The Periodicity of Influenza," *The Journal of Hygiene* 3, Vol. 29 (December, 1929): 227.

<sup>6</sup>C.O. Stallybrass, "The Periodicity of Influenza," *The Lancet*, February 14, 1920, 372.

criticised the texture of Brownlee's prophetic mantle, himself became a prophet. On, at least, one occasion, Mr Spear prophesied so accurately that his work caught the eye of the journalists."<sup>7</sup> Greenwood showed that Brownlee was incorrect simply by using the historical record, while he addressed Spear's theory by conducting his own calculations. In the end Greenwood wisely observed that "arithmetical devices of this class are, I believe, quite nugatory."<sup>8</sup> There is no way to predict the next pandemic. Influenza does not heed any rule laid out by observers or derived by any logical principle.

Yet this is what those in the highest positions of government are doing. The United States's Department of Homeland Security released its "National Strategy for Pandemic Influenza" in November 2005. In it, they stated, "Although the thing cannot be predicted, history and science suggest that we will face one or more pandemics in this century."<sup>9</sup> It further stated, "If this does not happen with the current H5N1 strain, history suggests that a different influenza virus will emerge and result in the next pandemic."<sup>10</sup> What provided the foundation for this and other information? In February 2006 "top government officials" of the United States participated in a "three-

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<sup>7</sup>Greenwood, 227.

<sup>8</sup>Ibid., 235.

<sup>9</sup>United States Department of Homeland Security, "National Strategy for Pandemic Influenza," November 2005, 1.

<sup>10</sup>Ibid., 2.

hour war game” that “required members of Congress and executive branch leaders to react to a flu pandemic that mirrored the 1918 one that killed millions worldwide.”<sup>11</sup> In May of 2006 an article stated that Michael Leavitt, secretary of the United States’s Department of Health and Human Services, was concerned about a possible bird flu outbreak: “To judge just how bad things could get, [he had] become a fanatical researcher of the last pandemic biggie, the 1918 Spanish flu, and how it changed history.”<sup>12</sup> In his book about Spanish Flu, John Barry, who influenced people like Leavitt and many others, writes, “If a new influenza virus does emerge... It will infect at least several hundred million, and probably more than a billion, people. In the United States alone, the Centers for Disease Control estimates that a new pandemic would make between 40 and 100 million people sick. So the prospect is threatening indeed.”<sup>13</sup> The United Kingdom’s national plan strikes a more optimistic tone by saying, “Although pandemic influenza remains one of the most severe natural challenges likely to affect the UK, by working together and preparing proportionately, we can all do a great deal to lessen its potential impact on our health and our social and economic wellbeing.”<sup>14</sup> In addition, the plan wisely admits that “it is impossible to

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<sup>11</sup>Matt Stearns, “Officials simulate bird flu outbreak,” *Kansas City Star*, February 8, 2006, A4.

<sup>12</sup>Paul Bedard, “Today’s Lesson: Pandemic 101,” *U.S. News and World Report*, May 1, 2006, 12.

<sup>13</sup>*Ibid.*, and Barry, 450.

<sup>14</sup>Department of Health, 5.

forecast its exact timing or the precise nature of its impact.”<sup>15</sup> It does, however, state that anywhere from 50,000 to 750,000 people could die.<sup>16</sup>

Mortality rates are not the only issue discussed. Current planning is also concerned about the situation for those living in the midst of a pandemic. The US government’s plan argues that “The next pandemic is likely to come in waves, each lasting months, and pass through communities of all size across the nation and the world. ... it will ultimately threaten all critical infrastructure by removing essential personnel from the workplace for weeks or months.”<sup>17</sup> The United Kingdom’s government plan states, “Although the intention will be to maintain normal services for as long and as far as that is possible, the unique nature of the challenges presented by a pandemic and their likely duration will inevitably require the curtailment of some services.”<sup>18</sup> These perceptions were formed based on the experience of previous pandemics, particularly the two examined in this dissertation and the ones that followed in 1957 and 1968. It is unwise to draw parallels like this from a few instances out of dozens of recorded pandemics. The historical record does not determine that a pandemic will have waves, nor how long these waves will last. Even the pandemics studied here show there is no requirement that a wave last months. In

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<sup>15</sup>Ibid., 6.

<sup>16</sup>Ibid., 21.

<sup>17</sup>United States Department of Homeland Security, 2.

<sup>18</sup>Department of Health, 10.

Britain the wave that began in January 1890 lasted only one month. Furthermore, we have no idea how a potential pandemic would impact infrastructure. The World Health Organization argues that “history shows that these events consistently bring an explosive surge in the number of illnesses and deaths sufficient to temporarily paralyse public services and economic productivity.”<sup>19</sup> The wording here is vague, but regardless, I think that we can assuredly say that services will not come to a standstill. A strange phenomenon about influenza pandemics is that geographically not every place is affected at once, despite the speed of travel. The WHO acknowledges this: “Based on past experience, pandemic influenza will not affect all countries or all parts of a country at the same time.”<sup>20</sup> In addition, we must remember that not everyone is infected in a flu pandemic. In 1918, the rate of infection was “≈30% of the world’s population.”<sup>21</sup> And based on “past experience” most people who are infected only suffer for an average of three days – a far shot from the death knell of society as we know it. The United Kingdom plan predicts that a maximum of half of the population would be exposed to the flu virus during a pandemic.<sup>22</sup> In both of the pandemics

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<sup>19</sup>World Health Organization, 13.

<sup>20</sup>Ibid.

<sup>21</sup>Terrence M. Tumpey, et. al., “Pathogenicity and immunogenicity of influenza viruses with genes from the 1918 pandemic virus,” *Proceedings of the National Academy of Sciences of the United States of America* 101, no. 9 (March 2, 2004), 3166, <http://www.pnas.org>.

<sup>22</sup>Department of Health, 21.

examined here society did not crumble. In the late 19<sup>th</sup> century pandemic the mail was delivered despite the demands of influenza visitations during the holiday season. And in the autumn of 1918 Britain continued to wage war, both at home and on the western front, during the worst wave of the worst pandemic ever. Absenteeism was high in some businesses, but the country did not collapse. In late October, 1918, the *Manchester Guardian* reported that “the public utility services, such as the post office, tramways, and Corporation employees generally, have not been appreciably affected.”<sup>23</sup> Even the high rates of illness in the Metropolitan Police force during the height of the second wave in 1918 only represented about six and one half percent of the total officers.<sup>24</sup> We do not, however, know how the links created by globalization in recent years would affect the situation today. This shows that we can no more draw an optimistic prediction from past experiences than we can a pessimistic one.

One thing that remained from the late 19<sup>th</sup> century into the 20<sup>th</sup>, despite the experience of past pandemics, was a strong faith in sanitation. In 1920 George Newman, Chief Medical Officer for the Ministry of Health wrote,

One thing is certain, that the fundamental requirement to make us masters of our fate is a universal improvement in the standard of health and the

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<sup>23</sup>“A Slow Advance in Manchester,” *Manchester Guardian*, October 29, 1918, 6.

<sup>24</sup>“The report of the Commissioner of police of the metropolis for the year 1918 and 1919,” Part 1 and Part 2, (London: Printed for His Majesty's Stationary Office by Darling and Son, LTD, 1920), 24.

conditions of life. No technical device, no narrow or specific remedy for pestilence, can ultimately triumph apart from a sanitary environment for the community and the sound nutrition of the individual. They are the bed-rock. Out of them spring the sources of national vitality.<sup>25</sup>

And yet, before the flu pandemic of 1889 many Britons proclaimed that their system of sanitation was the best. It seems that the lesson for Newman was that the sanitation effort had been good, but it left vulnerable areas that needed to be reinforced.

Newman had learned a lesson from the pandemics, but he had learned the wrong one: several pieces of evidence that ran counter to his prescription had been collected during these events. If he could make such a fallacious claim amidst experience and evidence that contradicted his beliefs, what hope do those have today who are barraged by so many erroneous arguments?

When studying history we must be careful how far we draw parallels, and what type of actions these inspire. Soon after Alfred Crosby published his definitive 1976 work on the 1918-1919 flu pandemic United States, a new threat appeared in an army camp in New Jersey, and the potential for another pandemic emerged. Experts at the time believed that the dormant 1918-19 strain was reappearing, and eventually the US government became committed to a massive immunization campaign, a response that garnered widespread criticism. About one-third of the US population was vaccinated, but there was no outbreak, and lawsuits were filed after some people experienced

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<sup>25</sup>George Newman, "Chief Medical Officer's Introduction," in *Great Britain, Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), xxi.

complications that were allegedly related to the vaccine.<sup>26</sup> For a few years after 1976 flu was once again on the agenda, but the emergence of AIDS soon shifted the focus of researchers. As Christopher Potter recently stated,

For those who lived through the influenza pandemics of 1957 and 1968, the prospect of such future episodes evokes concern and apprehension; for those who remember the pandemic of 1918-20, the emotion may be of horror and fear. It is the experience and knowledge of the severity of these and other pandemics, and the more common but less severe epidemics, which have made influenza the most studied of virus diseases, until the advent of the human immunodeficiency virus (HIV).<sup>27</sup>

Despite the threat, influenza itself did not garner enough interest to propagate itself as a topic. While AIDS may have caused those in the medical profession to turn away from influenza, there was a revived interest in influenza among historians in the late 1980s and early 1990s as the world dealt with AIDS, which had scholars looking for parallels. Then, in the mid-1990s the scientific community began to embrace the 1918-19 pandemic when two researchers at the Armed Forces Institute of Pathology in Washington, D.C. began a pet project to discover the genetic composition of the 1918 pandemic flu virus. At about the same time bird flu appeared in Hong Kong, but the threat soon subsided until years later.

Is there anything left to salvage from history that might be applicable to people living in the present day? There are some lessons that can be learned from these pandemics, but one must be careful in the extent to how much they are applied. It has

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<sup>26</sup>Gina Kolata, *Flu* (New York: Farrar, Straus and Giroux), 121-185.

<sup>27</sup>Potter, 3.

been forty years since the last true influenza pandemic, and could we be so arrogant to say that the general public is any more aware now of what constitutes influenza than they were in the years 1889-1919? It would not be inaccurate, in these respects, to state that not much has changed. In a survey of the disease written recently, Potter stated, “our knowledge of many aspects remains fragmentary; all authorities predict that future pandemics will occur, but are unsure of when or the ability or will to implement measures to prevent the tragedies of the past.”<sup>28</sup> In the past, when people had lived through a pandemic wave or two, they begged for more to be done. But people are unlikely to suffer inconveniences without any prospect of a pandemic, and furthermore, given the experience of the past, what can be done to prevent a pandemic? Experience shows, and authorities are aware, that quarantine is ineffective. The UK plan states that “modelling suggests that even a 99.9% restriction on travel into the country could only be expected to delay importation of the virus by up to two months.”<sup>29</sup> It seems that the best laid plans of the past were flawed in one essential respect – there was no effective method to curtail the course of the pandemics examined here. But is there anything more to do today? Are we left in the same situation as in the past? The Centers for Disease Control push influenza vaccines, and yet even in annual occurrences these are not always effective. The mutation required for a pandemic would likely nullify their benefits. What is in fact needed is education.

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<sup>28</sup>Potter, 3.

<sup>29</sup>Department of Health, 24.

In 1918 what we see is the failure of Victorian manners. The government led a valiant effort to educate the people in both of these pandemics, but this education needed to be done much sooner. Today laypeople are similarly uninformed about the nature of influenza. By spreading fear and worst case scenarios the books being written today are not helping the situation.

While some parts of a pandemic will occur regardless of human action, in others a change in habits and beliefs affected aspects of the pandemics. Even the modern doomsayers acknowledge this. An article in *Wellcome Science* published in October 2005 stated, “Spanish flu killed about 50 million people in 1918-19, but today’s global population is much larger, with huge urban centres and rapid air travel. Even with modern healthcare, experts estimate that anywhere between 2 million and 50 million people could die in a pandemic.”<sup>30</sup> If the number for 1918-19 listed above is accurate (though some estimates are as high as 100 million), and if a new pandemic did not kill more than the highest estimate above, 50 million, it would show that with a much higher global population, and in some ways a more susceptible population (with the rise of AIDS, for instance), the numbers would not be any higher.<sup>31</sup> This number is large, but the message here is positive. It means that if, in 1918-1919, approximately

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<sup>30</sup>Giles Newton, “Avian Flu,” *Wellcome Science*, October 2005, 18.

<sup>31</sup>In some places the present setting might be worse. Pete Davies writes, “The situation [in India] was made worse by famine.... While the 1918 influenza didn’t pay any attention to whether its victims were hungry or not, pneumonia on the other hand will always take a greater toll among the poorly fed.” Pete Davies, *The Devil’s Flu* (New York: Henry Holt and Company, 2000), 47.

two percent of people died from the disease, given the highest estimate today less than three-fourths of one percent would die. In 1918-19 Herbert French observed that “About 80% of those infected did not have severe attacks, but simply had the regular “three-day” type.... [and only] About 8% total... died.”<sup>32</sup> In his introduction to the 1920 government report, George Newman reminded readers that “The fatality of influenza is low, but its incidence is so vast that the number of deaths create an excessive mortality.”<sup>33</sup> In other words, the count was high because so many people contracted the disease. Influenza was not, in itself, a death sentence. And in 1957, the flu infected as many, and probably more, people as in 1918 and 1919, yet little more than one million worldwide died.<sup>34</sup>

In 1920 Newman stated, “There can be no doubt that as an historical survey [the report] will prove invaluable for future reference in the event of subsequent epidemics.”<sup>35</sup> This is indeed the case, but we must be sure that when documents like this are examined, the proper lessons are gleaned from their contents. One thing is assured: there is no certainty in influenza pandemics. In episodes during the deadliest

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<sup>32</sup>French, Herbert, “The Clinical Features of the Influenza Epidemic of 1918-19,” in Great Britain, *Report on the Pandemic of Influenza, 1918-19*, Reports on Public Health and Medical Subjects, no. 4 (London: H.M. Stationery Office, 1920), 69.

<sup>33</sup>Newman, xiv.

<sup>34</sup>Potter, 13.

<sup>35</sup>Newman, iv.

pandemic half of all people (in some areas more, in some areas less) escaped infection. Christopher Potter wrote, “North America, the possible origin of the pandemic, remained virtually free of influenza from June to August 1918, despite large numbers of infected people arriving by boat at the east coast ports.”<sup>36</sup> Pandemics may seem all-encompassing, but the whole populace is not ill at the same time. This is why business continues. This is why society endures. In his introduction, Newman wrote, “This document deals with one of the great historic scourges of our time.”<sup>37</sup> Notice the tone of this statement. He calls the pandemic “one of the great historic scourges,” but he adds the words “of our time.” This meant that the disease had great magnitude for the people of his day, but it is a relative comparison; by saying “one of,” he is leaving room for other diseases. And his use of the words “of our time” show that he did not believe it was the most destructive disease the world had seen. He was correct. The Spanish Flu is often compared to the Black Death, and in numbers the Spanish Flu overwhelmingly outpaced the latter plague. However, as a percent of the population, deaths due to the Spanish Flu are nowhere near those of the Black Death. Gina Kolata writes that “In the few short years from 1347 to 1351 the [Black Death] killed at least a third of the European population.”<sup>38</sup> The responses fit the diseases, too. As a whole people did not run to the countryside as they did in Boccaccio’s 14<sup>th</sup> century piece of

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<sup>36</sup>Potter, 9.

<sup>37</sup>Newman, iv.

<sup>38</sup>Kolata, 39.

fiction *The Decameron*. Undertakers were overworked in 1918-19, but there were not mass graves. Influenza was merely higher because population was higher.

In 1976 experts advised the Ford Administration that the American population needed to be mass immunized against the flu because they thought the flu virus of 1918 was reappearing. In 1976 this threat was real to many people. According to Kolata, “though the 1918 influenza holds but a small place in most histories, biographies, and memoirs, it seems that almost everyone at higher levels in the federal government in 1976 had a parent, uncle, aunt, cousin, or at least a family friend who had told lurid tales of personal experience with the 1918 flu.”<sup>39</sup> Richard Krause, one of those people involved in the decision to mass immunize, says that he and his contemporaries were in the “fog of epidemics” – they had no idea of what would or would not happen. He writes, “anxiety and alarm were widespread among those who lived through the devastating 1918 influenza pandemic about the potential for a recurrence.”<sup>40</sup> Krause continues to write, “I relate these personal reminiscences because many who read this article will be on the firing line when future epidemics threaten, and they may either erupt or fizzle out. You will be in a fog, and you will need to exercise the best judgment you can on the basis of available surveillance

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<sup>39</sup>Kolata, 148.

<sup>40</sup>Richard Krause, “The Swine Flu Episode and the Fog of Epidemics,” *Emerging Infectious Diseases* Vol. 12, No. 1 (January 2006): 40.

information and historical context.”<sup>41</sup> Given the concern over H5N1 influenza, it seems that we are once again in the fog of epidemics. In this setting, it is vital that policymakers not misuse history. A future pandemic may mimic 1918-19, but in all probability it will not. The historical record argues that it will be less significant, but even this type of prediction is wrong. The world also needs to understand that a future pandemic may be catastrophically worse than 1918-19. The worst only remains in that position until it is outdone by another. But we should also understand that there may not even be another pandemic. Edwin D. Kilbourne writes, “And to those who say ‘another pandemic is inevitable’, I point to the extinction of the dinosaurs, the conquest of smallpox and the proximity of asteroids.”<sup>42</sup>

While the future is unknown, each day without a pandemic changes the playing field. Much has been done in recent years since Jeffrey Taubenberger and Ann Reid started studying the preserved 1918 influenza virus samples in 1995. For instance, one of their studies shows that in the beginning of a pandemic, virus mutations do not become permanent. The authors of this study write, “In terms of pandemic planning, our results indicate that a specific antiviral drug or vaccine would have a uniform

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<sup>41</sup> Krause, 42.

<sup>42</sup>Edwin D. Kilbourne, “A Virologist’s Perspective on the 1918-19 Pandemic,” in Howard Phillips and David Killingray, eds. *The Spanish Influenza Pandemic of 1918-19: New Perspectives* (London: Routledge, 2003), 38.

effect during the important and often lethal first wave of a pandemic.”<sup>43</sup> The ramifications of this are potentially huge. This means that the virus might be stalled in time for a vaccine to be produced. Or, possibly, not finding a suitable host, the virus might be eliminated. In addition, advancements in vaccine manufacturing now provide the ability for this type of treatment to be developed much more quickly than in the past. One set of authors recently wrote that “The currently available technology would allow the development of effective vaccines, if industry could be given sufficient incentives and the regulatory agencies would be willing to embrace newer technologies, including the use of tissue culture, adjuvants, and reverse genetics.”<sup>44</sup> And concerning H5N1 avian flu, researchers have recently “found an antibody that could neutralize both types of H5N1 – H5N1 adapted to birds, and an engineered form that would in theory prefer humans. ... If a vaccine could be designed to protect people against viruses with this mutation, it might be used before a pandemic even started.”<sup>45</sup> With so many variables, the conclusions that can be drawn from history are limited.

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<sup>43</sup>Ann H. Reid, et. al, “1918 Influenza Pandemic Caused by Highly Conserved Viruses with Two Receptor-Binding Variants,” *Emerging Infectious Diseases* 9, no. 10 (2003): par. 18, <http://vnweb.hwwilsonweb.com>.

<sup>44</sup>Peter Palese, et. al, “What Can We Learn from Reconstructing the Extinct 1918 Pandemic Influenza Virus?,” *Immunity* 24 (February 2006): 121.

<sup>45</sup>Maggie Fox, “New vaccine may beat bird flu before it starts,” Reuters, August 9, 2007, <http://news.yahoo.com>.

It would be much more useful to study how attitudes towards medicine, healthcare, and the government have changed since 1919. If circumstances were identical to those of 1918-19, an influenza pandemic would have to be much more devastating and all-encompassing than the one the world experienced then to cause a serious disruption of society. But the situation is not the same, thus the impact of even a lesser influenza pandemic could be more severe. Charles E. Rosenberg writes, “Public expectations have increased proportionately, along with a widespread resentment at medicine’s inability to comply with these imperial expectations. Malpractice suits are only one – indirect – index of the pervasiveness of such hopes.”<sup>46</sup> If a large investment of faith has been placed in the ability of medical care to alleviate most unpleasantness and obliterate potential scourges, then people may very well respond in ways that they did not in the period 1889-1919.

Statements about the inevitability of an influenza pandemic, especially those of a catastrophic nature as is today’s fashion, are too reliant on the experience of the past, even though they attempt to address the experience of the future. This is a logical fallacy. Scaremongering is the self-serving method of individual authors. It is a way to make an event, though important, more relevant than it actually is. When doctors portray it in such a light, it may be a way for some to maintain a position of importance. In 1919 people believed in the future efficacy of medicine because the

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<sup>46</sup>Charles E. Rosenberg, “Disease and Social Order in America: Perceptions and Expectations,” in *AIDS: The Burdens of History*, ed. Elizabeth Fee and Daniel M. Fox (Berkeley: University of California Press, 1988), 16.

germ theory of disease was so new, and there were many untested avenues left to explore. Now, in respect to influenza and some other ailments, including the common cold, medicine rests on an untenable foundation which an influenza pandemic threatens to raze. As Thomas McKeown argued, “these reactions to the doctor’s position have been muted to some extent by the belief that his role is critical for the health of patients. When it becomes generally known, as surely it will, that the determinants of health are largely outside the medical care system, the questions are likely to become even more insistent.”<sup>47</sup>

Even if the 1918-19 pandemic terrified people (and for the most part it did not), it was still the exception amidst a mass of recorded pandemics. It is absolutely important that governments and healthcare professionals are prepared, and that the public is correctly educated. But we need not fear the flu or future pandemics. *If* history serves as any predictor, most people will be just fine.

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<sup>47</sup>Thomas McKeown. *The Role of Medicine: Dream, Mirage or Nemesis?* (Princeton: Princeton University Press, 1979), 178.

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### Abbreviations Used:

FD	Medical Research Council
GC	General Collection
MEPO	Metropolitan Police
MH	Ministry of Health
MUN	Ministry of Munitions
PIN	Ministry of Pensions and National Insurance

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