"Spanish Flu" and the Pandemic Imaginary

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In 1883, at the beginning of the modern microbiological era, the German disease geographer August Hirsch observed that few diseases could claim greater historical prominence than influenza. Due to its acute infectivity and "wide prevalence in time and space", he asserted in his *Handbook of Geographical and Historical Pathology*, "the history of the disease may be followed into the remotest period from which we have any epidemiological record." Indeed, with only the epidemiological record to guide him, Hirsch was able to retrospectively identify influenza epidemics dating back to 1173 and a succession of "pandemic years" from 1510 onwards.[1]

However, to judge by the bibliographic record, Hirsch's regard for influenza's "exceptional place among the acute infectious diseases" was not shared by his contemporaries. Though in 1894 the English epidemiologist Charles Creighton published a two-volume survey of epidemics in Britain that included a chapter on influenza epidemics and pandemics, readers would have to wait 93 years for the first scholarly history of the subject with the publication in 1976 of Alfred Crosby's *Epidemic and Peace*.[2] Even then, Crosby showed little interest in the pre-modern history of influenza, concentrating almost exclusively on the 1918-1919 "Spanish influenza".[3] In so doing, Crosby initiated a historiographical tradition that, four decades later, shows little

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[1] Hirsch, *Handbook of Geographical and Historical Pathology*, 7-54. In 1757, the English surgeon John Huxham had made a similar observation, describing influenza as the "morbum omnium epidemicus" or the "greatest of all sicknesses". Huxham, *Observations on the Air and Epidemic Diseases from the Year MDCCXXVIII to MDCCXXXVII Inclusive.*

[2] Creighton, *A History of Epidemics in Britain.;* Crosby, *Epidemic and Peace, 1918*.

[3] Although there is no evidence the pandemic started in Spain, the widely accepted explanation for the soubriquet "Spanish" is that, unlike in Britain and other Allied countries, news of the epidemic was not subject to censorship in Spain, a neutral country in WW1, and foreign correspondents in Madrid freely reported the spreading illnesses.
Phillips and David Killingray, eds., *The Spanish Influenza Pandemic of 1918*, 3.; Honigsbaum, *Living With Enza*, xiii.

sign of abating, hence the way that the Spanish flu dominates post-1976 books and articles on influenza in the Isis Bibliography of the History of Science.

As I have argued elsewhere, this preoccupation with the 1918-1919 influenza pandemic is largely a product of historical epidemiology and retrospective statistical analysis.[4] In its 1920 *Report on the Pandemic*, the UK's Ministry of Health estimated the worldwide mortality at in excess of six million, the majority of the deaths being concentrated in British India.[5] By 1927, however, the Chicago University bacteriologist, Edward O. Jordan, in an epidemiological review undertaken for the American Medical Association, estimated the global death toll at no less than 21.6 million.[6] In 1991, Patterson and Pyle called for a further upward revision, arriving at a "conservative total" of 30m.[7] Eleven years later, Johnson and Mueller, using new data and revised methods for calculating the "excess mortality", put the worldwide death toll from Spanish flu in "the order of 50 million," and possibly as high as 100m.[8] However, Spreeuwenberg et al. argue that these estimates are too high. Drawing on the Human Mortality Database containing information from 13 countries and data extracted from the records of the *Statistical Abstract for British India*, they came up with a much lower figure of 17.4 million influenza deaths in 1918-1919.[9] Regardless of which figures are most accurate, the result is that the Spanish flu has become the template against which other modern pandemics involving respiratory pathogens are measured. According to Phillips and Killingray, the focus on the global mortality also meant that for most of the twentieth century the "history [of influenza] was treated as a utilitarian object for quite specific epidemiological investigation" and writings on the Spanish flu were seen through a "narrowly medical scientific lens."[10]

However, come the centenary of the pandemic in 2018 the field had been transformed. To be sure, epidemiologists continued to mine public health data sets for fresh insights into the socio-economic impacts of Spanish flu and patterns of global morbidity and mortality, but the historiography was now marked by increasing

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[4] Honigsbaum, *A History of the Great Influenza Pandemics.*
[5] UK Ministry of Health, *Report on the Pandemic of Influenza 1918-19*.
[6] Jordan, *Epidemic Influenza,* 3.
[7] Patterson and Pyle, "The Geography and Mortality of the 1918 Influenza Pandemic".
[8] Johnson and Mueller, "Updating the Accounts".
[9] Spreeuwenberg, Kronenman, and Paget, "Reassessing the Global Mortality Burden of the 1918 Influenza Pandemic".
[10] Phillips and Killingray, eds., *The Spanish Influenza Pandemic of 1918*, 14.

interdisciplinarity. Employing the latest bio-archaeological techniques, molecular pathologists had begun to offer fresh insights into the origins of the H1N1 pandemic virus, while evolutionary biologists were employing molecular clock phylogenetic methods to deepen the understanding of the natural history of H1N1 and other influenza viruses and their virulence in human populations.[11] The insights of these "historians in lab coats", to use Monica Green's phrase, were, in turn, taken up by popular science writers and medical historians, leading to a new wave of publications on the 1918-1919 pandemic.[12] No sooner was the ink dry on these histories, however, than in 2019 the world was visited by the pandemic of Covid-19. Although the pandemic was caused by a novel coronavirus, rather than an influenza virus, epidemiologists immediately highlighted the parallels with influenza and sought to model the public health impacts using data sets derived from the study of the 1918, 1957 and 1968 flu pandemics.[13] As a result, historians were once again prompted to re-engage with primary sources on influenza and revisit the 1918 pandemic in light of Covid-19.

This bibliographic review identifies six distinct thematic areas within the historiography of H1N1 Spanish influenza. The first is the one identified by Phillips and Killingray in which epidemiologists, physicians and other health experts studied the 1918 pandemic from a medical perspective and through the lens of public health with the aim of "learning lessons" with which to inform responses to future influenza pandemics.[14] These were followed, in the mid-1970s, by the first narrative accounts by popular historians whose interest was spurred by the recent experiences of the 1957 and 1968 pandemics.[15] Around the same time, the 1918 pandemic also became an important inflection point for environmental historians such as Crosby whose

[11] Worobey and Rambaut, "Genesis and pathogenesis of the 1918 pandemic H1N1 influenza A virus".; Worobey, Cox, and Gill, "The Origins of the Great Pandemic".
[12] Green, "Genetics as a Historicist Discipline".
[13] Ferguson, *et al*., "Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand".
[14] For a critique of this "lessons from history" approach see: Peckham, "Covid-19 and the anti-lessons of history".
[15] **Collier, *Plague of the Spanish Lady*; Crosby, *Epidemic and Peace*.**

scholarship was informed by insights from disease ecology and the impact of "virgin soil" epidemics on immunologically naïve populations.[16]

Economic and social historians were slower to respond to the growing popular and scientific interest in influenza but by the 1980s were also actively mining archival sources in an attempt to retrieve patients' experiences of what Crosby, in the reissued 1989 edition of his book, called "America's forgotten pandemic".[17] This turn to social history was spurred by Roy Porter's 1985 call for "history from below" and the advent of the HIV/AIDS pandemic, which punctured the hubristic assumption that infectious diseases had been consigned to the medical past.[18] This was followed by a distinct cultural turn as scholars dissatisfied with the limitations of the social history of medicine began employing social constructivist approaches and discourse analysis, the better to understand changing medical constructions of influenza and the cultural and emotional responses.[19] At the same time, medical anthropologists and other scholars, drawing on the works of Michel Foucault and Bruno Latour, began analysing global health security discourses and the generation of knowledge of influenza and other "emerging infectious diseases" (EIDs) to show how, following the 2003 SARS epidemic and the bird flu scares of the early noughties, influenza had been transformed into an object of biosecurity and locus for anxieties about the transfer of pathogens across species boundaries.[20]

Although the 1918-1919 influenza was a global phenomenon, scholarship initially skewed to American and European perspectives – a reflection perhaps of the unfortunate identification in the primary literature of the pandemic with "Spain" and the preoccupation with the Allied experience of influenza during World War One. However, beginning in the 1980s, non-Western perspectives also began to proliferate. Inspired by the experiences in British India and other former colonial possessions, such as Rhodesia (modern Zimbabwe), these histories drew inspiration from Crosby but were also at pains to show that it was not only in America that the pandemic had been

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[16] Crosby, "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America".
[17] Crosby, *America's Forgotten Pandemic.*
[18] Porter, "The Patient's View".
[19] Jordanova, "The Social Construction of Medical Knowledge".
[20] Lakoff and Collier, eds., *Biosecurity Interventions;* Fearnley*, Virulent Zones;* Keck*, Avian Reservoirs.*

"forgotten".[21] These colonial and post-colonial histories of influenza represent an important fifth thematic area, one that has expanded greatly in recent years, de-centring the historiographical focus on North America and bringing to the fore the experiences of colonial subjects at a remove from the European theatre of conflict.[22]

The sixth phase is best described as a demographic turn. Spurred by new research challenging earlier historiographical characterisations of Spanish influenza as a democratic killer, historians have once again been revisiting epidemiological data sets in an effort to highlight the disparities between the observed morbidity and mortality patterns in different social, economic and ethnic groups and diverse geographical settings.[23] The result is a growing appreciation of the uneven health burdens of Spanish influenza.

Writing at the height of the deadly second wave of the pandemic in December 1918, *The Times* remarked: "Never since the Black Death has such a plague swept over the face of the world … [and] never, perhaps, has a plague been more stoically accepted."[24] Three years later, *The Times* saw little reason to revise this verdict, opining that "so vast was the catastrophe and so ubiquitous its prevalence that our minds, surfeited with the horrors of war, refused to realise."[25] According to Johnson, Spanish influenza was simply "a bit player, in the larger story of the Great War", hence his characterization of the flu as an "unregarded" killer in 1918.[26] However, this was not the case for medical researchers for whom the failure to develop effective vaccines and/or treatment

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[21]Ranger, 'The Influenza Pandemic in Southern Rhodesia"; Mills, "The 1918–1919 Influenza Pandemic"; Killingray, "The Influenza Pandemic of 1918–1919 in the British Caribbean".; Phillips, *"Black October"*.; Tomkins, "Colonial Administration in British Africa during the Influenza Epidemic of 1918-19".; Tomkins, "The Influenza Epidemic in Western Samoa".; Palmer and Rice, "A Japanese Physician's Response to Pandemic Influenza".

[22] Arnold, "Death and the Modern Empire: The 1918-19 Influenza Epidemic in India".; Arnold, "Disease, Rumour and Panic in India's Plague and Influenza Epidemics, 1896-1919".; Walker, "The Influenza Pandemic of 1918 in Southeast Asia".; Hardiman, "The 1918 Influenza Epidemic and the Adivasis of Western India".; Heaton and Falola, "Global Explanations Versus Local Interpretations: The Historiography of the Influenza Pandemic of 1918-19 in Africa".; Killingray, "A New 'Imperial disease'".

[23] See, for example: McCraken and Curson, "Flu Down Under: A Demographic and Geographic Analysis of the 1919 epidemic in Sydney, Australia".; Fanning, *Influenza and Inequality.*; Mamelund, "A Socially Neutral Disease?"; Mamelund, "1918 Pandemic Morbidity".; Chandra, Kuljanin and Wray, "Mortality from the Influenza Pandemic of 1918-19: The Case of India".

[24] Honigsbaum, *Living With Enza,* xiii.

[25] Honigsbaum, Living With *Enza*, 83- 84.

[26] Johnson, *Britain and the 1918-19 Influenza Pandemic,*180.

drugs was a source of abiding professional shame and who, after the war, returned to their laboratories determined to make amends for this "failure of expertise.[27] As Eyler argues, these failures owed much to the "fog" of bacteriological research and Richard Pfeiffer's mis-identification of Bacillus influenza (Haemophilus influenzae) as the etiological agent.[28]The result, as Bresalier has shown, is that in the 1930s researchers began "transforming flu" and "forging" a new identity for influenza research along more scientific lines.[29] The key development was the discovery in 1933 that ferrets could be infected with influenza, enabling the laboratory study of the virus in a reliable animal model, and opening up a pathway for the development of influenza vaccines using the latest chick-egg embryo cultivation techniques.[30] Following the foundation of the World Health Organization in 1948 and the establishment by the late 195 0s of a network of world influenza reporting laboratories, for the first time in history it now became possible to envisage the control and prevention of influenza pandemics along rational lines.[31] The era of pandemic preparedness had begun.[32]

In parallel with these developments, veterinary pathologists were deepening their understanding of the natural history of the virus and the relationship between human influenzas and zoonotic outbreaks observed in swine and domesticated poultry.[33] This, in turn, led ecologically minded researchers, such as Frank Macfarlane Burnet, to reframe infectious disease as a problem of insufficient adaptation and to inquire into the role that disturbances of equilibrium states played in the transfer of zoonotic infections and their virulence in human populations.[34] By turn-of-the-century, these ecological perspectives had also started to receive attention from historians and anthropologists, among others. A key reference point was William Beveridge's 1976 survey of the then state of virological and ecological knowledge and his subsequent paper on the ecology of influenza A viruses.[35] An Australian veterinary pathologist who

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[27] Tomkins, "The Failure of Expertise".; Tognotti, "Scientific Triumphalism and Learning from Facts".
[28] Eyler, "'The Fog of Research'".; Eyler "De Kruif's Boast".; See also: Tognotti, "Scientific Triumphalism and Learning from Facts".
[29] Bresalier, "Transforming Flu".; Bresalier, "Uses of a Pandemic".
[30] Bresalier, "Neutralizing Flu".
[31] Dehner, *Influenza".*
[32]Caduff, *The Pandemic Perhaps".*
[33] Beveridge, *Influenza.*; Dehner, *Influenza*, 62.
[34] Burnet and White, *Natural History of Infectious Diseases*.
[35] Beveridge, *Influenza*.; Beveridge, "Unravelling the Ecology of Influenza A Virus".

had collaborated with Burnet in Melbourne, Beveridge summarized the growing evidence that influenza was a virus that frequently crossed the species barrier to infect pigs, ducks, domestic poultry and humans and that this ecological nexus might explain the genesis of epidemics and pandemics. Soon, these insights into the ecology of influenza and other zoonotic pathogens were being taken up by medical historians, spurring a growing interest in the intellectual origins of disease ecology.[36] The application of new molecular clock phylogenetic methods also prompted medical historians to revisit the primary literature on US Army training camps in an effort to better understand the relationship between ecological and immunological conditions in the camps and the virulence of the H1N1 virus and its interaction with commensal bacteria.[37] Interest in the role of disease ecology and "host-switching" in the emergence of Spanish flu and other pandemic viruses is only likely to grow, given the likely involvement of bats and pangolins in the transfer of the novel coronavirus, SARs-CoV-2, to humans, and the impact of climate change and deforestation on other EIDs[38]

A similar interest in ecology and the role of the environment influenced William H. McNeil's 1976 bestseller *Plague and Peoples* and was also apparent in Crosby's book, which appeared the same year.[39] However, it was not until the late 1990s that these scientific ideas would spark a new wave of popular writings on Spanish flu .[40] The immediate impetus was an outbreak in 1997 of an obscure avian influenza subtype, labelled H5N1, in Hong Kong. Following further outbreaks of H5N1 in Southeast Asia in the early noughts, medical anthropologists began mapping how ecological insights into the role of wild waterfowl and "avian reservoirs" in the genesis of epidemics and pandemics were fuelling political and cultural anxieties about multispecies interactions and the global pandemic imaginary.[41] But perhaps the more significant development was the publication of the partial genetic sequence of the H1N1 Spanish flu virus in the same year as the Hong Kong bird flu outbreak. The result of painstaking bio-archaeological detective work by a Swedish pathologist, John Hultin,

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[36] Hardy, "Animals, Disease, and Man".; Anderson, "Natural Histories of Infectious Disease". Honigsbaum and Méthot, "Introduction: Microbes, Networks, Knowledge."
[37] Humphreys, "The Influenza of 1918".
[38] See, for example: Morens, Daszak and Taubenberger, "Escaping Pandora's Box".
[39] McNeill, *Plagues and Peoples*.
[40] See, for example: Davies, *Catching Cold*.; Kolata, *Flu.*
[41] Fearnley, *Virulent Zones.*; Keck, *Avian Reservoirs*.; Canavan, "Opening Pandora's Box at the Roof of the World".

and Jeffrey Taubenberger, a molecular pathologist at the Armed Forces Institute of Pathology (AFIP) in Bethesda, Maryland, the publication of the sequence captured the attention of the global scientific community.[42] Eight years later, Taubenberger completed the sequence and showed that the virus had avian-like attributes.[43] Following new outbreaks of H5N1 across Southeast Asia, this raised the spectre that another pandemic comparable to 1918-1919 might be imminent. The result was a further wave of popular titles, including, most notably, John Barry's *The Great Influenza* and Mike Davis's *The Monster at Our Door*.[44]

The academy was somewhat slower to respond to this new wave of popular interest in the "forgotten" pandemic. In 1992 Fred Van Hartesveldt had edited a pioneering comparative volume that brought together urban history studies of the Spanish flu pandemic's impact on cities in Germany, France, England, the United States and Latin and South America.[45] This was followed in 1998 by an international conference in Cape Town bringing together international scholars to share "new perspectives" on the pandemic. However, though Routledge subsequently published 16 papers from the proceedings, Phillips and Killingray lamented that, at the time, the conference attracted "little attention beyond that of the 36 scholars who gathered to discuss it".[46]

This relative disinterest was not to last. By 2003, according to one authoritative bibliography, there were more than 600 published and unpublished works on the pandemic.[47] Since then, there have been at least 12 more major academic and popular titles and in excess of 20 theses and dissertations.[48] These works have been spurred by a variety of factors, including, perhaps most significantly, the growing awareness of the importance of pandemic preparedness in a period marked by closely spaced epidemics and pandemics of bird flu (2006), swine flu (2009), Ebola (2014) and Zika (2015). As one collection arising out of a 2008 workshop on influenza and public health put it,

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[42] Taubenberger, *et al.*, "Initial Characterization of the 1918 'Spanish' influenza virus".
[43] Taubenberger, *et al*., "Characterization of the 1918 influenza virus polymerase genes".; Tumpey, *et al*., "Characterization of the Reconstructed 1918 Spanish Influenza Pandemic Virus".
[44] Barry, *The Great Influenza.*; Davis, *The Monster at Our Door*.
[45] Van Hartesveldt, *The 1918-1919 Pandemic Of Influenza.*
[46] Phillips, "The Recent Wave of 'Spanish' Flu Historiography".
[47] Phillips and Killingray, *The Spanish Influenza Pandemic of 1918-19.*
[48] See, for example: Bristow, *American Pandemic.*; Pettit and Bailie, *A Cruel Wind.*; Opdycke, *The Flu Epidemic of 1918.*; Caduff, *The Pandemic Perhaps.*; Milne, *Stacking the Coffins.*; Phillips, *In Time of Plague.*; Mawdsley, "The 'Never-to-be Forgotten Scourge'".

current and future flu pandemics "can be better understood in their social, epidemiological, ecological and political entirety by careful examination of past influenza epidemics".[49] Following the pandemic of Covid-19 in 2019-2021, this interest in pandemic influenza preparedness is only likely to grow. Currently, the phrase "Spanish influenza epidemic" elicits 3.09 million results on Google, about six times more than in 2014.[50] The phrase "Spanish flu pandemic" elicits an astonishing 27.6 million results.

Another important feature of the bibliography is the way that writings on influenza reflect changing academic trends. In spite of Charles Rosenberg's observation in 1992 that "influenza… is not ordinarily studied by the social or economic historian [as] it is too easily transmitted, too universal, and insufficiently lethal or disfiguring," social and cultural historians drawing on the field of memory studies have mined public archives and private collections for survivors' perspectives on the pandemic.[51] These scholars are less interested in epidemics as Rosenburgian "sampling devices" than in the role of discourse and narrative on subjective experiences of the pandemic, as well as the Spanish flu's intersection with questions of national identity.[52] However, for those eager to contest Rosenberg's characterisation of influenza and validate its historiographical importance, the conclusions reached by these studies are somewhat deflationary. As Davis has observed, influenza "never penetrates deeply into the realm of identity… It is something one has or does not have, not something one is".[53] In my 2014 monograph, I make a similar point, arguing that the reason social historians have generally eschewed the study of influenza is that it is a "protean infection that is always changing its medical identity".[54] However, as a "palimpsest that draws on the social, cultural and historiographical materials available to it" it is well- suited to cultural analysis.[55]

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[49] Gunn, Giles-Vernick and Craddock, *Influenza and Public Health.*
[50] Phillips, "The Recent Wave".
[51] Rosenberg, *Explaining Epidemics, 111.; A good examples of the mining of survivors' recollections is Mawdsley,* 'The Never-to-be Forgotten Scourge'".

[52] Rosenberg, *Explaining Epidemics*, 101.
[53] Davis, *The Spanish Flu,*162.
[54] Honigsbaum, *History of the Great Influenza Pandemics*, 2.
[55] Honigsbaum, *History of the Great Influenza Pandemics*, 4

The cultural turn has also seen renewed interest in newspaper reporting of the 1918 pandemic and other flu pandemics and the "framing" of influenza in contemporary media.[56] This scholarship has been greatly enabled by new digital collections, such as Gale Historical Newspapers and the University of Michigan's Influenza Encyclopaedia, allowing scholars to compare at a glance the reporting of influenza epidemics and pandemics in different geographical locations and historical periods.[57] Though still in its infancy, this scholarship has begun to demonstrate how media representations of influenza reflect changing medical knowledge of the virus and the role of scientific uncertainty in public health risk messaging, as well as the media's amplification of biomedical metaphors.[58] Another factor is the relationship between biopolitical discourses and newspaper censorship, particularly in times of war.[59] At the same time, recognising that censorship during the First World War may have distorted representations of the Spanish flu, scholars have extended their inquiries to earlier and later influenza pandemics, such as the 1889-92 "Russian influenza" pandemic and the 1957 "Hong Kong" flu and 1968 "Asian flu" pandemics, both of which coincided with periods of relative peace, at least in North America and Europe.[60]

The 100th anniversary of the pandemic in 2018 also saw a wave of new popular titles, including Laura Spinney's *Pale Rider*.[61] Drawing on the latest historical scholarship and research by virologists, epidemiologists and economists, plus studies in non-Western settings, Spinney traced the diverse global impacts of the pandemic in locales removed from the European theatre of conflict. In the process, she challenged Crosby's historiographical characterisation of Spanish flu as a "forgotten pandemic". Instead, she argued that the pandemic had far-reaching impacts, affecting everything from public health to politics, race, literature and the arts.

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[56] Blakely, *Mass Mediated Disease.*
[57] https://www.gale.com/intl/primary-sources/historical-newspapers; http://www.influenzaarchive.org/
[58] Nerlich and Halliday, "Avian Flu".; McPhail, "A Predictable Unpredictability".; Abeysinghe, "An Uncertain Risk".
https://www.gale.com/intl/primary-sources/historical-newspapers;
[59] Honigsbaum, "Regulating the 1918-19 Pandemic".
[60] Smith, "The Russian Influenza in the United Kingdom, 1889-1894".; Honigsbaum, "The Great Dread".; Honigsbaum, "The 'Russian' influenza in the UK".; Honigsbaum, "Revisiting the 1957 and 1968 influenza pandemics".
[61] Spinney, *Pale Rider.*

Perhaps more significantly, the approach of the centenary of the pandemic saw renewed interest in influenza's epidemiology and its demographic impacts. In its 1919 *Report on the Pandemic*, the UK Ministry of Health had concluded that pandemic influenza had fallen equally on "the sanitarily just and unjust." Tomkins similarly described the Spanish flu as "remarkably democratic", while Crosby declared that the "rich died as easily as the poor".[62] Already, in his 2003 study of the impact of the flu in France, Zylberman had begun to question this characterisation of Spanish flu, arguing that, in France at least, there was a "Holocaust in a Holocaust".[63] U sing case studies from Norwood, Massachusetts, Fanning argued that the impression of flu as a democratic killer may have been due to press coverage of prominent deaths and the fact many of those impacted lacked "access to the written word" and therefore were too marginalized "to earn a place in America's collective memory."[64] Similarly, based on her analysis of the impact of influenza on working class neighbourhoods of Winnipeg, Jones concluded that "social inequality was an important determinant of influenza mortality."[65] These findings are supported by the Norwegian demographer Svenn-Erik Mamelund, who has questioned the Spanish flu's characterisation as a "socially neutral disease".[66] In Denmark and other parts of Scandinavia, Mamelund has shown there were clear social disparities in pandemic mortality rates. In Oslo, for instance, the highest mortality rate was among the working classes, those living in small flats, and people on the east side of the city.[67]

Demographers and historians have also begun turning their attention to whether differential morbidity and mortality rates reflect racial and ethnic disparities. Drawing on contemporary epidemiological studies, Crosby observed that African-Americans had lower morbidity and mortality than the majority white population during the autumn of 1918. Crosby's explanation was that blacks were more exposed to the mild spring/ summer wave of influenza and therefore had more immunity to the deadlier secondary wave in the fall. However, Økland and Mamelund have shown that while blacks generally had lower morbidity, they suffered higher case fatality rates than

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[62] Tomkins, "Failure of Expertise", 446; Crosby, *Epidemic and Peace*, 227.
[63] Zylberman, "A Holocaust in a Holocaust".
[64] Fanning, *Influenza and Inequality*, 128
[65] Jones, *Influenza 1918*, 63.
[66] Mamelund, "A Socially Neutral Disease?".
[67] Mamelund, "1918 Pandemic Morbidity".

whites during the fall wave. Why this was the case is unclear.[68] One suggestion is that blacks, particularly those recruited to the US Army from sparsely populated rural areas in the Southern United States, had less exposure to community bacteria and therefore may have been more susceptible to bacterial pneumonias that followed primary viral infections with influenza. Another suggestion is that both in the South and northern cities, such as Baltimore, blacks tended to live in more crowded dwellings, had poorer access to health care, and, because of racism and economic factors, were less likely to receive timely treatment than whites. However, though the pandemic coincided with a period of heightened jingoism and anti-immigrant sentiment in the United States, Cohn argues that, unlike plague in the Middle Ages or the cholera epidemics of the nineteenth century, the Spanish flu pandemic was not associated with stigma or blame of religious and ethnic minorities. Instead, documenting the numerous acts of charity and self-sacrifice, Cohn argues the pandemic prompted extraordinary acts of compassion.[69]

Looking back over a century of scholarship, it is easy to be overwhelmed by the bibliography and its different historiographical phases. Yet, interest in the Spanish flu pandemic is only likely to grow in the wake of the pandemic of Covid-19, which has exposed similarly profound fissures in society and which also appears to have exacted a disproportionate toll on blacks and ethnic minorities.[70]

Already, the experience of social distancing and mask-wearing during Covid-19 has provoked renewed interest in the impact of non-pharmaceutical interventions and other epidemiological "lessons" from 1918. However, while these studies suggest that US cities which adopted measures such as school closures, bans on public gatherings, and the isolation of the sick and the quarantining of contacts early on in the pandemic experienced lower morbidity and mortality from influenza, at the time of writing the value of similar interventions during the coronavirus pandemic is unclear, though there is growing evidence that cities and countries which locked down early suffered lower mortality and lesser economic impacts than those that hesitated or did not impose as

[68] Økland and Mamelund, "Race and 1918 Influenza Pandemic in the United States". See also: Chowell and Viboud, "Pandemic Influenza and Socioeconomic Disparities".
[69] Cohn, "The Great Influenza: A Pandemic of Compassion".
[70] Krishnan, Ogunwole, and Cooper, "Historical Insights on Coronavirus Disease 2019 (COVID-19)".

strong suppressive measures.[71] Nonetheless, it underscores how the history of the 1918 flu pandemic continues to be mobilised as a resource for the mitigation of influenza pandemics and those of other respiratory pathogens. Perhaps more significantly, the appearance of memorials to the coronavirus pandemic is throwing up fresh insights into the absence of similar contemporary memorials to the Spanish flu and what Guy Beiner, in a new collection on 1918 pandemic memory refers to as processes of "social" and "cultural forgetting".[72] The result is that few historians today would take issue with Hirsch's claim for the historical importance of influenza or the centrality of the "forgotten" Spanish flu pandemic to the modern pandemic imaginary.

[71] Markel, Lipman, Navarro *et. al*., "Nonpharmaceutical Interventions Implemented by US Cities During the 1918-1919 Influenza Pandemic". Hatchett, Mecher, and Lipsitch, "Public Health Interventions and Epidemic Intensity during the 1918 Influenza Pandemic".
[72]Beiner, "The Great Flu: Between Remembering and Forgetting".