

Second Opinion

The Recent Wave of ‘Spanish’ Flu Historiography

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Summary. This article surveys the surge of writing over the last 15 years by social and medical scientists on the topic of the devastating ‘Spanish’ influenza pandemic of 1918–1919, which it labels a ‘second wave’ of this pandemic’s historiography. It views this work in three ways: by looking, first, at what wider, contextual factors triggered this explosion of writing; secondly, at the authors of these works and their specific motivations for taking up the subject; and thirdly, at how their labours have altered, refined or re-shaped our understanding of this great catastrophe’s origin, its direct and indirect toll, its differential incidence by class and gender, its tripartite connections to the First World War, its portrayal in the contemporary press, and its impact on medical science. Finally, the article urges that a number of new lenses should be brought to bear on the pandemic as its centenary approaches, to provide a 360 degree perspective on it. Viewing it thus, it suggests, could well yield a third wave of pandemic historiography.

Keywords: ‘Spanish’ flu; influenza epidemic; pandemics; historiography; health security

Question: What do *Downton Abbey* (2010→), *The Twilight Saga* (2008–2012) and *The Last Town on Earth* (2006) have in common?

Answer: All three of these recent fictional global blockbusters (respectively, a TV drama series, four full-length feature films and an award-winning first novel)¹ feature the so-called ‘Spanish’ flu pandemic of 1918–19 as pivotal to their unfolding tales.

That they do indicates that, for the first time since it occurred 96 years ago, awareness of that pandemic has become common popular knowledge around the world, or at least in its English-reading and -viewing quarters. This is confirmed by the Google Ngram in Figure 1 which plots the occurrence of the term ‘Spanish flu’ in millions of books printed before 2009 and scanned by Google for its Google Books digital library (see Figure 1 in which the y-axis shows the percentage of books in the Google Library which contain the phrase ‘Spanish flu’ and the x-axis the year in which these books were published).

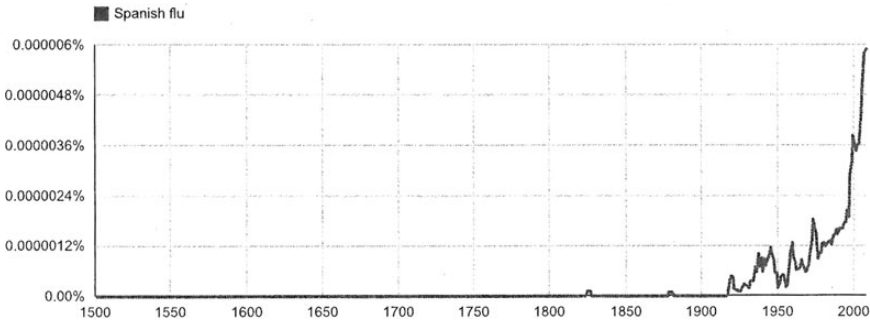
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¹In *Downton Abbey* (Series 2, Episode 8) three prominent characters go down with ‘Spanish’ flu in (surprisingly) April 1919, one actually dying of it. In *The Twilight Saga* the parents of the male lead die of ‘Spanish’ flu in Chicago in 1918 and he is only saved from the same fate by being turned into a vampire. Thomas Mullen’s *The Last Town on Earth* takes place during and entirely because of the ‘Spanish’ flu epidemic. For

those unfamiliar with these three icons of early twenty-first-century popular culture, Wikipedia will provide enlightenment. Underlining how far knowledge of the ‘Spanish’ flu pandemic has become common currency in English-language fiction of late is the fact that, according to amazon.com, at least 23 novels with this as a major or minor theme have been published since 2000.



This current global awareness of the 'Spanish' influenza pandemic is in striking contrast to the situation in 1998 when the first international conference on the history of the pandemic in Cape Town attracted little attention beyond that of the 36 scholars who gathered to discuss it. The volume of conference papers which resulted provided, inter alia, a survey of the historiography of the pandemic until then, identifying four distinct ways in which it had been conceived over time, viz. as an epidemiological episode, as an event of high drama, as a social and public health crisis, and as the object of a state-of-the-art scientific adventure led by Jeffery Taubenberger which aimed to re-constitute the causative virus from the recovered tissues of long-dead flu victims.²

This article will take up the survey from that high point in what may be described as the first wave of scholarly 'Spanish' flu historiography, extending it to the present by examining the historical writing on the pandemic since 1999. It will also seek to explain why such writing has waxed to such an extent that, today, Google hits for the phrase 'Spanish flu epidemic' number 445,000 and for 'flu epidemic history' 1,780,000, while books and theses which have appeared on this topic (just in English, German, Spanish, Portuguese, and Dutch) over the last fifteen years top 50, and articles in social science and humanities journals alone number over 200.³ In addition, at least seven film documentaries have been made in this period on the 1918–19 pandemic.⁴ Like the second wave of that pandemic, the historiography of 'Spanish' flu has also exploded.

A feature of this recent writing is that, unlike the earlier historiographical phases, it is dominated by no one conception of the pandemic and that its authors hail from a wide array of disciplinary backgrounds, though few of them have sought to span the divide between C. P. Snow's two cultures as well. Even without significant collaboration

²The conference proceedings were published as H. Phillips and D. Killingray, eds, *The Spanish Influenza Pandemic of 1918–19: New Perspectives* (London and New York: Routledge, 2003).

³G. Beiner, 'Out in the Cold and Back: New-Found Interest in the Great Flu', *Cultural and Social History*, 2006, 3, 496–505.

⁴The seven professionally-made documentaries of which I know are: *Influenza 1918* (PBS, The American Experience series, 1998); *History Undercover: The Doomsday*

Flu (Lou Reda Productions, New York, 1998); *Pandemic* (BBC, Horizon series, 1999); *Secrets of the Dead: Killer Flu* (Granada TV, 2003); *In Search of Spanish Flu* (BBC, 2008); *Killer Flu* (RTE/Radio and Television Ireland, Outbreak series, 2009); *We Heard the Bells: The Influenza of 1918* (US Dept of Health and Human Services, 2010) and *Die Spanische Grippe—Das große Sterben* (2012) [originally released as *La grande épidémie* (Arte France, 2005)].

between social and medical scientists, however, the pandemic has become an object of concurrent interrogation from a host of perspectives, making it the focus of what Cubist painters might call 'simultaneity' and followers of Foucault probably 'a multi-lens gaze'. Scholars have come to recognise how many-sided an episode a pandemic is and that to make full sense of its complex, interconnected and transnational character, it must be viewed through numerous lenses at the same time. Lying behind this recognition are a variety of twenty-first-century stimuli.

The Stimuli

To those catalysts of historical inquiry into the pandemic already spurring scholars into print before 1999—the rise of social, urban and environmental history, the softening of disciplinary walls which drew disciplines other than history into studying the past through their own lenses, the raging AIDS pandemic and global fascination with Taubenberg's breathtaking virological archaeology—the twenty-first century added other stimuli, making for a powerful concatenation of impetuses.

Already at the end of 1997 fears of a new flu pandemic had been triggered when 18 human cases of H5N1 influenza had occurred in Hong Kong as a result of cross-species infection from chickens there. Six of those so infected died. Despite the mass culling of 1.6 million chickens in that city in a bid to prevent the virus spreading further, a new outbreak re-surfaced there in 1999, prompting another bout of mass chicken culling. Even with this fowl-slaughter, the H5N1 virus re-appeared in South-East Asia in 2003, causing 76 deaths in Vietnam and its neighbours within two years.

Avian flu was in the air, causing panic throughout the world lest it be transmitted to the West on an overnight flight. Newspapers, TV channels and the burgeoning internet covered it extensively and a flood of 'how to survive the avian flu' books filled bookshop shelves, all with chapters or sections on previous influenza epidemics.

Six years later, in 2009, an outbreak of swine flu in Mexico intensified this anxiety among the jittery public, especially when the causative virus was found to be of the same H1N1 family as that of the 'Spanish' flu and this began to radiate across the world, claiming hundreds of lives. Once more the media carried lurid accounts of swiftly spreading influenza pandemics present and past.

Such a pattern of rapid global transmission of a respiratory disease had already been demonstrated in practice in 2003 by the outbreak of SARS (Severe Acute Respiratory Syndrome) which spread from Asia to North America exactly as it was predicted a flu pandemic would do, claiming some 800 lives. It was thus probably not by chance that a new edition of Alfred Crosby's trailblazing *America's Forgotten Pandemic* was published in that year.⁵ In a new preface to an otherwise unchanged text, Crosby wrote, 'The latest fright is SARS ... at first suspected of being a new strain of influenza. . . . As I write this ... [i]t is well on its way to circling the globe in a matter of weeks.'⁶ His publisher, Cambridge University Press, did not

⁵The first edition of Crosby's pioneering scholarly account of the epidemic in the USA, *Epidemic and Peace, 1918* (Westport and London: Greenwood Press) had been published in 1976; in 1989 it was re-printed with the text unchanged as *America's Forgotten Pandemic: The Influenza of 1918* (Cambridge:

Cambridge University Press), but with a new preface referring to the then escalating AIDS pandemic.

⁶A. Crosby, *America's Forgotten Pandemic: The Influenza of 1918* (Cambridge: Cambridge University Press, 2003), xii.

hide its marketing intentions, claiming in its blurb, 'In this new edition, with a new preface discussing the recent outbreaks of diseases, including the Asian flu and SARS, *America's Forgotten Pandemic* remains both prescient and relevant.'

Nor was SARS alone in conjuring up images of novel epidemics sweeping flu-like across the planet. Indeed, the concept of 'emerging viral diseases' had begun to crystallise in the USA as far back as 1989. From the 1990s it had gained form as diseases like Ebola Fever, Marburg Fever, Congo Fever, Rift Valley Fever, Lyme Disease and West Nile Fever hit the headlines across an increasingly globalised world in which the pace of microbial traffic was accelerating. 'A hot virus from the rain forest lives within a twenty-four plane flight from every city on earth', warned a character in Richard Preston's 1994 best-seller on this subject, *The Hot Zone*.⁷ In that year these novel diseases were bracketed together under the generic label 'Emerging Infectious Diseases', which was the title of a new medical science journal launched at the same time. Some epidemiologists even suggested that their emergence marked a new era in the developed world's disease history, a third epidemiological transition. According to Crosby, they had begun to quip wryly that 'The nineteenth century was followed by the twentieth century, which was followed by the ... nineteenth century.'⁸

Adding to popular awareness of the perils of epidemics past and present was the growth of fears of bioterrorism in the USA from the 1990s, especially in the wake of 9/11 and the anthrax scare which followed it. These were subsumed in what political scientists began to call 'health security', an all-encompassing label coined in 2000. 'New and re-emerging infectious diseases will ... complicate US and global security over the next 20 years', warned the US National Intelligence Council in that year. 'These diseases will endanger US citizens at home and abroad ...'⁹ Of such a threat influenza offered a prime example. In the words of one of the most enthusiastic proponents of the importance of the connection between disease and state security, Andrew Price-Smith, 'the re-emergence of a devastating H1N1 influenza virus, which in 1918 killed 50 million people, crippled armies, destabilised economies, and contributed to sclerotic governance, surely constitutes a direct threat to all countries.'¹⁰ A clearer call for deeper study of past influenza epidemics could hardly be asked for.

That many of the authors of works on past influenza epidemics were responding to some or all of these stimuli is evident from their own prefaces and introductions. It is to these and how they shaped their work that this article will now turn.

The Stimulated

For some of the recent historians of the 'Spanish' flu it was clearly the avian flu epidemic of the late 1990s/early 2000s which steered them directly to its 1918 predecessor as a topic for historical research. Thus, Mark Honigsbaum's interest 'was born in 2005 when I was dispatched to Vietnam on a reporting assignment to write about bird flu', he explained in the prologue to his *Living with Enza: The Forgotten Story of Britain and the Great Flu*

⁷R. Preston, *The Hot Zone. A Terrifying True Story* (New York: Anchor Books Doubleday, 1995), 16.

⁸Cited in Crosby, *Epidemic and Peace*, xiii.

⁹Cited in A. Price-Smith, *Contagion and Chaos: Disease, Ecology, and National Security in the Era of Globalization* (Cambridge, MA: MIT Press, 2009), 190.

¹⁰Price-Smith, *Contagion and Chaos*, 206.

Pandemic of 1918 (2009). 'How, I wondered had people responded in 1918 when they had faced a real as opposed to a merely hypothetical threat from pandemic influenza?'¹¹

In writing two histories of influenza in 2012 George Dehner also had his eye on the present. 'This book seeks to address these questions [about the nature of flu and the extent of the threat which it posed] through providing some historical perspective on the pandemic of 2009 and current concerns with Bird flu', he explained. 'All the events of 2009–10 ... have occurred before.'¹²

Twenty-first-century epidemics were also responsible for two Canadians, Betty O'Keefe and Ian Macdonald, turning their focus onto the 1918 forerunner. 'At a time when SARS and mounting fears of a new flu pandemic are capturing headlines across North America,' they wrote in *Dr Fred and the Spanish Lady: Fighting the Killer Flu* (2004), 'the story of medical officer Dr Fred Underhill [of Vancouver] and his battle against the 1918 Spanish influenza ... is particularly timely.'¹³

Even more present-minded and didactic in its origin was a workshop in Paris in 2008 on past influenza pandemics and public health. The volume flowing from it, *Influenza and Public Health: Learning from Past Pandemics*, was (as the title suggests) premised on the belief that responses to the prevailing avian flu pandemic should be informed by lessons drawn from previous flu pandemics. Current and future pandemics, the editors argued, 'can be better understood in their social, epidemiological, ecological and political entirety by careful examination of past influenza epidemics'.¹⁴ That H1N1 swine flu broke out as they were editing the text only gave added force to their purpose. As the Director-General of the Institut Pasteur, Alice Dautry, put it in her foreword written in December 2009, 'We are now confronting the H1N1 influenza pandemic, but past epidemics, particularly evaluated comparatively, can provide us with information on a range of ways that a future one might unfold, and it therefore remains important to reflect critically upon past pandemics as well as the present one, so as to prepare ourselves in the broadest possible way for future epidemic events.'¹⁵

Nor was it only instructive lessons for the present that the 'Spanish' flu might provide. Some felt that the heightened public interest in influenza pandemics might also offer a good market for books on the 1918 episode. Hence, Dorothy Pettit (or her publisher) seems to have decided in about 2005 that it would be timely to put into print her 1976 doctoral thesis, one of the first works to tackle the 'Spanish' flu in the USA historically. With its scientific content comprehensively re-written with the assistance of a biochemist, Pettit's *A Cruel Wind: Pandemic Flu in America 1918–1920* (2008)¹⁶ drew extensively on her thesis,

¹¹M. Honigsbaum, *Living with Enza: The Forgotten Story of Britain and the Great Flu Pandemic of 1918* (London: Macmillan, 2009), xiii–xiv.

¹²G. Dehner, *Global Flu and You: A History of Influenza* (London: Reaktion Books, 2012), 9. Dehner's other 2012 volume, *Influenza: A Century of Science and Public Health Response* (Pittsburgh: University of Pittsburgh Press, 2012) has less immediate roots, viz. Taubenberger's dramatic molecular archaeology, the outbreaks of avian flu and SARS and his interest, as an environmental historian, in global health which influenza pandemics epitomised.

¹³B. O'Keefe and I. Macdonald, *Dr Fred and the Spanish Lady: Fighting the Killer Flu* (Surrey, BC: Heritage House, 2004), blurb.

¹⁴T. Giles-Vernick and S. Craddock, eds, *Influenza and Public Health: Learning from Past Pandemics* (London and Washington: Earthscan, 2010), 2.

¹⁵Giles-Vernick and Craddock, *Influenza and Public Health*, xiv.

¹⁶D. A. Pettit and J. Bailie, *A Cruel Wind - Pandemic flu in America, 1918–1920* (Murfreesboro, Tenn.: Timberlake Books, 2008).

making it very much an example of 'first wave' influenza historiography 32 years late. In the changed historiographical environment of 2008, its strength lay in its attention to the social, medical and nursing consequences of 1918 rather than in its descriptions of the pandemic's by-then well-established course in the USA.

A similar sense of there being a likely market for books on the 'Spanish' flu may lie behind the publication in 2010 of Patricia Fanning's *Influenza and Inequality: One Town's Tragic Response to the Great Epidemic of 1918*, fifteen years after the thesis on which it was based had been submitted.¹⁷

In the case of John Barry, author of *The Great Influenza: The Epic Story of the Deadliest Plague in History* (2004), the avian flu re-shaped his original wish (conceived before it broke out in 1997) to treat the 'Spanish' flu as a case study of 'how American society reacted to an immense challenge, a war nature launched against man, imposed on a war of man against man.'¹⁸ '[M]y own interests have always focused on people who try to exercise some kind of control over events', he admitted, and so, not surprisingly, his account of the epidemic in the USA is one that looks at it primarily from the perspective of the country's top doctors, scientists and politicians.¹⁹ Although those whom Barry labelled 'the warriors' had been vanquished by the pandemic in 1918, their struggle against it was filled with the kind of heroism in the face of 'nature in its fullest rage', which he admired. To him they epitomised Camus' statement, 'What's true of all the evils in the world is true of plague as well. It helps men to rise above themselves.'²⁰

To his book plan, the experience of the panic in the USA during the twenty-first-century's avian flu outbreaks added a sharper recognition of the high drama created by a deadly flu epidemic, an environment which he skilfully evoked in his text. No wonder that one reviewer described it as 'a medical thriller' and another as 'very artfully constructed [with phrases] repeated like Wagner's leitmotifs'.²¹

In the same year that Penguin brought out a paperback edition of his bestseller (i.e. 2005), research into the 1918 pandemic elsewhere in the USA was being propelled from quite another direction. Concern about how the H5N1 avian flu epidemic might compromise the country's health and other security prompted the Department of Defense's Defense Threat Reduction Agency to commission Howard Markel's Center for the History of Medicine at the University of Michigan to investigate why some US communities 'had experienced extremely low levels of influenza during the infamous 1918–1920 influenza pandemic'.²² Perhaps there were lessons to be learnt from them which might buy time during a new flu pandemic while a suitable vaccine was being hastily developed.

Thoroughgoing research by Markel's team on 'non-pharmaceutical interventions' found that all that the seven 'influenza escape communities' had in common was early isolation or

¹⁷P. J. Fanning, *Influenza and Inequality: One Town's Tragic Response to the Great Epidemic of 1918* (Amherst and Boston: University of Massachusetts Press, 2010). The thesis on which this was based was 'Disease and the Politics of Community: Norwood and the Great Flu Epidemic of 1918' (Ph.D thesis, Boston College, 1995).

¹⁸J. Barry, *The Great Influenza: The Epic Story of the Deadliest Plague in History* (New York: Penguin, 2005), 449.

¹⁹*Ibid.* (New York: Viking, 2004), 463.

²⁰A. Camus, *The Plague* (Aylesbury: Penguin Books, 1979), part II, ch. 7, 106 as cited in Barry, *The Great Influenza* (2004), 341.

²¹Extracts from reviews in the *Arkansas Times* and *The New York Review of Books* respectively, quoted in the 2005 Penguin edition of Barry's book.

²²<<http://www.chm.med.umich.edu/research/escape-communities>> accessed on 20 August 2014.

'protective sequestration' (as they termed it). However, to fellow-historians, the project's 275-page final report, its 'Digital Encyclopedia' containing the primary sources consulted on the epidemic in 50 US cities and its special supplement to *Public Health Reports*, featuring twelve 'spellbinding articles that lend historical perspective to a very timely topic', are likely to be of more value than its unremarkable findings which would not have been news to medieval Asians and Europeans.²³ As the editors of the 'Digital Encyclopedia' proudly pointed out, it 'constitutes the largest digital collection of materials relating to the 1918–1919 influenza epidemic [in the USA]'.²⁴ Using this resource to 'listen closely to the stories of the past', would, it was hoped, assist in preventing a repetition of the 'misery' of 1918, the 'fundamental goal of our public health mission'.²⁵

A similar objective spurred Washington to help fund other inquiries into influenza pandemics past, present and future at this time too. Beneficiaries included a joint Australian–American–British Pandemic Study Group (one of whose members, Colonel Dennis Shanks, produced several articles on the 1918 pandemic in the military) and the US Institute of Medicine's Forum on Microbial Threats.²⁶ The latter's 2004 workshop on 'Pandemic Influenza—Assessing Capabilities for Prevention and Response' included papers by John Barry ('1918 Revisited: Lessons and Suggestions for Further Inquiry'), Jeffery Taubenberger ('Chasing the Elusive 1918 Virus: Preparing for the Future by Examining the Past') and a team of epidemiologists ('Pandemic Influenza and Mortality: Past Evidence and Projections for the Future'). Nor did the workshop's investigation of past pandemics limit itself to 1918. The pandemics of 1957 and 1968 came under scrutiny too. However, as a second Forum on Microbial Threats workshop five years later recognised, amidst fears of the H1N1 outbreak, the 1918 H1N1 virus 'is truly the "mother" of all [modern] influenza pandemics'.²⁷

Recognition of this fact prompted a private company to put out a CD-ROM in 2009 containing 25,180 pages of 'Scientific, Medical, and Personal Histories of the Historic Spanish Flu Pandemic' drawn from official US sources. It marketed this as an 'Essential Reference for Health Professionals'.²⁸

²³The 'Digital Encyclopedia' can be found online at <<http://www.quod.lib.umich.edu/f/flu.org>> accessed on 20 August 2014. The quote is from L. D. Reed, 'A Message from the Editor', *Public Health Reports*, 125 (Supplement 3), 2010, 1 (available at <www.publichealthreports.org/archives/issueopen.cfm?articleID=2449> accessed on 20 August 2014).

²⁴<<http://www.quod.lib.umich.edu/f/flu/about.html>> accessed on 20 August 2014.

²⁵L. D. Reed, 'A Message from the Editor', 2.

²⁶For examples of Shanks's works see: C. Schuck-Paim, G. D. Shanks *et al.*, 'Exceptionally High Mortality Rate of the 1918–19 Influenza Pandemic in the Brazilian Naval Fleet', *Influenza and Other Respiratory Viruses*, (2013), 7, 27–34; G. D. Shanks, 'Low but highly variable mortality among nurses and physicians during the influenza pandemic of 1918–19', *Influenza and Other Respiratory Viruses*, 2011, 5, 213–19; G. D. Shanks *et al.*, 'Determinants of Mortality in Naval Units during the 1918–19 Influenza Pandemic', *Lancet Infectious Diseases*, 2011, 11, 793–9; G. D. Shanks *et al.*, 'Mortality Risk Factors during the 1918–19

Influenza Pandemic in the Australian Army', *Journal of Infectious Diseases*, 2010, 201, 1880–89; J.A. Summers, N. Wilson, M. G. Baker and G. D. Shanks, 'Mortality Risk Factors in an Outbreak of Pandemic Influenza on a New Zealand Troopship in 1918', *Emerging Infectious Diseases*, 2010, 16, 1931–7; G. D. Shanks, 'Simultaneous epidemics of influenza and malaria in the Australian Army in Palestine in 1918', *Medical Journal of Australia*, 2009, 191, 654–7.

²⁷D. A. Relman *et al.*, eds, *The Domestic and International Impacts of the 2009-H1N1 Influenza A Pandemic: Global Challenges, Global Solutions* (Washington: National Academies Press, 2010), 5. A summary of the 2004 workshop is to be found in S. L. Knobler *et al.*, eds, *The Threat of Pandemic Influenza—Are We Ready?* (Washington: National Academies Press, 2005).

²⁸*1918 Great Influenza Pandemic History: Scientific, Medical, and Personal Histories of the Historic Spanish Flu pandemic—Essential Reference for Health Professionals* (Progressive Management, CD-ROM, 2009), 25,180 pages. A second collection

North American anthropologists' turn to the study of the 1918 pandemic in the first decade of the twenty-first century was also primarily in response to the epidemic environment they perceived around them then, 'a time obsessed with killer germs' two of them called it.²⁹ Wanting 'to breach the persistent gulf between the branches of anthropology to bring to bear the full power of our discipline's broad vision of humanity to address the issue of infected spaces, epidemics, and plagues', a number sought to do so by focusing on the 'Spanish' flu in the belief that 'Current thinking about epidemics is rooted in past experience, and past experience, in turn, is reinterpreted through the imagination of the present.'³⁰ In *Plagues and Epidemics—Infected Spaces Past and Present* (2010), three of them therefore interrogated the connection often made between the 1918 flu and the avian flu of the early twenty-first century. That this connection was not linear led one of them to question whether the former should indeed remain 'the catastrophe against which all modern epidemics are measured'.³¹

Thus, whether as a source of lessons or of non-lessons for comprehending and addressing current epidemics, the 'Spanish' flu's relevance to the present has made it a powerful magnet for scholars in the twenty-first century. Indeed, just at the moment it might well epitomise the power of history as pedagogy—with all its attendant dangers of presentism—better than most other 96-year old historical topics.

The Results of Stimulation

Triggered, or at least encouraged, by these contemporary events and/or enabling intellectual and funding environments, historical writing on the 'Spanish' influenza pandemic in the last 15 years has both deepened and widened our comprehension of this standout episode of the disease in rampaging form.

What the literary scholar Priscilla Wald calls an 'outbreak narrative' has, in the case of the 1918–19 pandemic, become a veritable virological detective story (or even a contest) in search of the index case, with John Oxford, Chris Langford, Donald Olson and Andrew Price-Smith challenging in print and on film the long-accepted belief that the pandemic first appeared among US army recruits at Camp Funston, Kansas in March 1918.³² Less radically, John Barry has suggested that this version should be slightly amended to read, among civilians in nearby Haskell County, Kansas in late January 1918.³³

released in 2009 but on two CD-ROMS is evidently more present-minded, but does not omit the 'Spanish' flu pandemic—21st Century H1N1 Flu and Swine Pandemic Influenza Guidebook ... *Clinical Data and Guidelines, History of 1918 Spanish Flu* (Progressive Management, 2 CD-Roms, 2009).

²⁹A. Herring and A. C. Swedlund, eds, *Plagues and Epidemics—Infected Spaces Past and Present* (New York: Berg, 2010), 1.

³⁰Herring and Swedlund, *Plagues and Epidemics*, the first quote is to be found on p. 2, the second on p. 3.

³¹*Pandemics and Pandemic Threats since 1900* cited in D. A. Herring and S. Lockerbie, 'The Coming Plague of Avian Influenza' in Herring and Swedlund, *Plagues and Epidemics*, 183.

³²P. Wald, *Contagious—Cultures, Carriers, and the Outbreak Narrative* (Durham: Duke University Press,

2008), 2; J. S. Oxford *et al.* 'A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France during the Great War Provided the Conditions for the Emergence of the "Spanish" Influenza Pandemic of 1918–1919', *Vaccine*, (2005, 23, 940–5; and J. S. Oxford, 'The So-Called Great Spanish Influenza Pandemic May Have Originated in France in 1916', *Philosophical Transactions of the Royal Society of London B*, 2001, 356, 1857–9; C. Langford, 'Did the 1918–19 Influenza Pandemic Originate in China?', *Population and Development Review*, 2005, 31, 473–505; D. 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*, 2005, 102, 11059–63; Price-Smith, *Contagion and Chaos*, 74–6.

³³Barry, *The Great Influenza* (2004), 92–7.

While the fact of placing the origin of the epidemic elsewhere in Kansas may be a function of the zeal of Dr Loring Miner and diligent reporting by the US Public Health Reports and the US Army, overturning that location requires from those arguing for a different 'ground zero' (e.g. in Étapes, South China or Austria-Hungary) an ability to connect the epidemiological dots, that is, to find a credible link between these sites and Kansas with its first documented cases. Recently, Oxford and Gill identified volunteer American doctors and nurses working in Étapes camp in 1916–1917 as possible vectors when they returned to the USA, but to accept this, it must be demonstrated that they were still infectious when they disembarked after crossing the Atlantic and then travelled to Kansas.³⁴ Evidence that the disease had also spread among French civilians neighbouring the Étapes camp would be telling too.

With regard to the identity of the causative virus in 1918 there is now no such uncertainty, thanks to the molecular wizardry of Taubenberger and his team. That the responsible H1N1 virus was of avian origin and probably began to take shape as late as 1915–1917 has at least two major implications:

- (i) that the relatively light toll among the older component of the world's population in 1918 was not the result of prior exposure to a similar H1N1 virus in the 'Russian' flu pandemic of 1889–1890, which means that low mortality among them was perhaps because they were no longer physiologically or socially young. The corollary of this is that there were physiological (i.e. cytokine storm) or socio-economic and cultural reasons (i.e. male breadwinners not taking to bed at once when symptoms began to show) for the high mortality among young adults;
- (ii) the period 1915–1917 should now become the focus of intensive investigation worldwide for evidence of the new virus emerging and of any conditions which would have favoured such a process.

The chief reason for the pathogenicity of the virus also now seems apparent, thanks to 'Team Taubenberger', viz. its ability to lodge deep in the lungs and start its attack there rather than in the more usual upper respiratory tract. This goes some way to explain the cause of the quickest deaths in 1918 (in South Africa it was labelled 'die driedagsiekte' or 'three days sickness'), probably primary viral pneumonia causing severe ARDS (Acute Respiratory Disease Syndrome) with its telltale heliotrope cyanosis.³⁵ Slower and more numerous deaths were usually the result of secondary bacterial infection. The major difference between a slow and a speedy flu-related death in 1918 was therefore, in crude terms, likely to have been the difference between secondary bacterial and primary viral pneumonia.

The immediate toll of victims from these and other influenza-related causes in 1918–1919 was, according to the latest estimates of Johnson and Mueller, some 50 million, that is, 66 per cent up on Patterson and Pyle's figure of about 30 million.³⁶ Those who have worked with the deficient official figures of the time cannot but agree with such a raised estimate. In their own research, many will have come across sentiments similar to those expressed early

³⁴E-mail from Douglas Gill to author, 9 August 2011.

³⁵For the term 'three day sickness', see, H. Phillips, *Black October: The Impact of the Spanish Influenza Epidemic of 1918 on South Africa* (Pretoria: Government Printer, 1990), 131. See too Crosby, *Epidemic and Peace*, 25, 49.

³⁶N. P. A. S. Johnson and J. Mueller, 'Updating the Accounts: Global Mortality of the 1918–1920 "Spanish" influenza pandemic', *Bulletin of the History of Medicine*, 2002, 76, 105–15. K. D. Patterson and G. F. Pyle, 'The Geography and Mortality of the 1918 Influenza Epidemic', *Bulletin of the History of Medicine*, 1991, 65, 4–21.

in 1919 by the district surgeon of one of South Africa's worst-hit districts, Kingwilliamstown, that 'No reliance could be placed on the [official] statements as to the number of Native men, women and children who had died during the epidemic'.³⁷

But of course the 'Spanish' flu's demographic impact was not limited only to those who died in 1918 and 1919. Babies not born because their pregnant mothers had died, those not conceived because of the death of potential mothers and infants who died for want of a nurturing mother taken off by the flu must be considered as influenza pandemic-linked deaths or non-births too, as must those of short-term flu survivors who succumbed within a few years to sequelae of flu or latent conditions exacerbated or brought on by a bout of the disease.³⁸ In this respect, Svenn-Erik Mamelund's recent work on the effect of influenza on mental health in Norway, Patrick Zylberman's inquiry into the subsequent medical history of Frenchwomen born between 1918 and 1920 and Wilfried Witte's inquests into Franz Kafka's death from tuberculosis in 1924 and a number of prominent people from encephalitis lethargica in the 1920s provide telling concrete examples.³⁹

Even longer-lasting may have been the effect on fetuses in the wombs of mothers who contracted 'Spanish' flu but did not die of it. A recent analysis of US census data from 1960–1980 by the economist David Almond reveals that the social profile of Americans born between January and September 1919 (i.e. babies who had been *in utero* at the height of the pandemic) indicates that they were marked underachievers compared to cohorts born just before or just after them. In terms of levels of education and income, they were noticeably less successful than their near-contemporaries and far more likely to be disabled or to be recipients of welfare grants.⁴⁰ Was this the result of fetal distress caused by their mothers having suffered a bout of 'Spanish' flu during the second or third wave of the pandemic?

³⁷Cited in Phillips, *Black October*, 88. Official figures reported for Kingwilliamstown in December 1918 were 2,024 Africans 'with 500 to 600 native deaths not yet reported'. But one month later, the local magistrate raised the figure to 7,081. Even this figure was suspect, however, as the district surgeon's quoted comment above makes clear.

³⁸A. Reid, 'The Effects of the 1918–1919 Influenza Pandemic on Infant and Child Health in Derbyshire', *Medical History*, 2005, 49, 29–54.

³⁹S.-E. Mamelund, 'The impact of influenza on mental health in Norway 1872–1929', *Historical Influenza Pandemics: Lessons Learned* (Meeting and Workshop: Abstracts, Copenhagen, May 2010); P. Zylberman, 'A Holocaust in a Holocaust: the Great War and the 1918 "Spanish" Influenza Epidemic in France', in Phillips and Killingray, *The Spanish Influenza Pandemic*, 198; W. Witte, *Tollkirschen und Quarantäne* (Berlin: Wagenbach, 2010), 40–8, 49–66.

⁴⁰D. Almond: 'Is the 1918 Influenza Pandemic Over? Long-Term Effects of *in Utero* Exposure in the Post-1940 U.S. Population', *Journal of Political Economy*, 2006, 114, Figure A1. Following Almond's lead, other studies have discovered similar characteristics in the life-paths of the Italian, Taiwanese, and Brazilian birth-

cohorts of 1919 (see M. Percoco, 'Spanish Flu and Human Capital Accumulation in Italian Regions', unpublished seminar paper, December 2011, available at: <http://didattica.uni.bocconi.it/mypage/upload/49430_20111212_043611_PERCOCO_INFLUENZA.PDF> accessed on 20 August 2014; M.-J. Lin and E. M. Lin, 'Does *in Utero* Exposure to Illness Matter? The 1918 Influenza Epidemic in Taiwan as a Natural Experiment', available at: <www.nber.org/papers/w20166.pdf> accessed on 20 August 2014; R. E. Nelson, 'Testing the Fetal Origins Hypothesis in a Developing Country—Evidence from the 1918 Influenza Pandemic', unpublished paper, May 2008, available at: <home.utah.edu/~u0154844/BrazilFluPaper-080827.pdf> accessed on 20 August 2014. However, for recent disagreements with Almond's argument, see R. Brown, 'The 1918 US Influenza Pandemic as a Natural Experiment, Revisited', unpublished seminar paper, February 2011, available at: <http://mitsloan.mit.edu/neudc/papers/paper_276.pdf> accessed on 20 August 2014; and A. A. Cohen, J. Tillinghast and V. Canudas-Rono, 'No Consistent Effects of Prenatal or Neonatal Exposure to Spanish Flu on Late-life Mortality in 24 Developed Countries' in *Demographic Research*, 2010, 22, 579–634.

An equally unexpected long-term effect of the pandemic was its impact on other diseases, most notably tuberculosis. Analysis of the US mortality figures for the decade after 1918 by the demographer Andrew Noymer shows that deaths from TB in those years fell markedly because, he argued, the pandemic had claimed the lives of a significant number of people whose health had already been compromised by TB, thereby reducing the pool of those with that disease who would probably have died of it in the course of the 1920s if the influenza pandemic had not supervened. He sums up that 'Plummeting TB death rates in 1919 and thereafter' therefore made the 'Spanish' flu, paradoxically, 'a factor in the decline of tuberculosis'. That this also meant that the life expectancy of American men (who had died from influenza in 1918–1919 in greater numbers than women) rebounded after 1918–1919 more quickly than that of women is another surprise, which points to the need to see influenza epidemics in-the-round pathologically, or as Merrill Singer would have it, 'syndemically'.⁴¹

As to who the 'Spanish' flu killed, the impression that it was 'remarkably democratic' in its selection of victims—Crosby declared that 'the rich died as readily as the poor'—seemed to be confirmed at the time by the death in many countries of doctors, nurses, lawyers, journalists, clergymen and politicians along with workers.⁴² But this impression of indiscriminate death may be the result of the disproportionate coverage that such prominent and unusual deaths received in the press, perhaps masking the fact that social class was an (if not *the*) important factor in determining not so much who contracted the flu, but of who died of it through a lack of adequate nursing and rest. Certainly this is what recent fine-grained challenges to the accepted belief by Mamelund, Fanning, Esvyllt Jones and Cairtona Foley suggest. 'In Winnipeg,' for example, 'social inequality was an important determinant of influenza mortality', concludes Jones, citing differential mortality rates in different districts of the city, a pattern that has parallels in some other—but by no means all—towns and cities around the world.⁴³

⁴¹'Plummeting TB death rates in 1919 and thereafter' is from A. Noymer, 'Epidemics and Time: Influenza and TB during and after the 1918–19 Pandemic', in Herring and Swedlund, *Plagues and Epidemics*, 144; 'a factor in the decline of tuberculosis' is from Noymer in Herring and Swedlund, *Plagues and Epidemics*, 139; discussion of the improvement in male life expectancy can be found in Noymer in Phillips and Killingray, *The Spanish Influenza Pandemic*, 202–17. For 'syndemically' see, M. Singer, 'Ecosyndemics: Global Warming and the Coming Plagues of the Twenty-First Century', in Herring and Swedlund, *Plagues and Epidemics*, 24.

⁴²'[R]emarkably democratic' are the words of S. Tomkins, 'The Failure of Expertise: Public Health Policy in Britain during the 1918–19 Influenza Epidemic', *Social History of Medicine*, 1992, 5, 446; Crosby's view that rich and poor were affected alike can be found in *Epidemic and Peace*, 227.

⁴³E. W. Jones, *Influenza 1918: Disease, Death, and Struggle in Winnipeg* (Toronto: University of Toronto Press, 2007), 63. Support for this thesis is available in a number of works: K. McCracken and P. Curson,

'Flu dowunder: a demographic and geographic analysis of the 1919 epidemic in Sydney' in Phillips and Killingray, *The Spanish Influenza Pandemic*, 124, 129–30; Phillips, 'Black October', 32; C. Edwards, 'Autumn 1918: The "Spanish Flu" Pandemic in London' (B.Sc. dissertation, University College London, 2006), 32–5; Zylberman 'A Holocaust in a Holocaust', 198–9; S.-E. Mamelund, 'A Socially Neutral Disease? Individual Social Class, Household Wealth and Mortality from Spanish Influenza in Two Socially Contrasting Parishes in Kristiana 1918–19', *Social Science and Medicine*, 2006, 62, 923–40; D. C. Pearce *et al.* 'Understanding Mortality in the 1918–1919 Influenza Pandemic in England and Wales', *Influenza and Other Respiratory Viruses*, 2011, 5, 89–98; D. A. Herring and E. Korol, 'The North–South Divide: Social Inequality and Mortality from the 1918 Influenza Pandemic in Hamilton, Ontario', in M. Fahrni and E. W. Jones, eds, *Epidemic Encounters: Influenza, Society, and Culture in Canada, 1918–20* (Vancouver and Toronto: UBC Press, 2012), 97–112. For details of areas which bucked this trend, see, F. R. van Hartesveldt, ed., *The 1918–1919 Pandemic of Influenza. The Urban Impact in the Western*

Given the epidemiology of influenza—highly infectious, readily transmitted by coughing and sneezing and thus easily spread in an overcrowded environment and most likely to take serious root and become fatal in bodies physically stressed and poorly nourished—such a correlation is unsurprising.

When to these conditions were added geographical remoteness, poor biomedical and nursing provision and general official neglect—as among the *adivasis* of western India, the Inuit of Alaska and Labrador and the Sami (Laps) of Lapland—the result was castastrophe, as recent studies of the disproportionately high mortality rate among these groups have shown.⁴⁴

Indeed, differential mortality in the pandemic generally (whether by group or by location) is a question which has attracted increasing attention in the last 15 years as both social and medical scientists have sought to explain how it was possible to escape the full force of the lethal second wave of ‘Spanish’ flu. Exposure to the milder first wave has now been demonstrated—rather than just surmised—to have been a significant immunising factor in two case studies in how high mortality in the second wave was avoided, but the academic jury is still out on the question of whether being physically distant from urban outbreaks (so-called ‘rurality’) had the same beneficial effect or not.⁴⁵

This ‘second wave’ of flu historians has also been at the forefront of applying fresh analytical frames like class and gender to bear on the pandemic—the ‘first wave’ from the mid 1970s to the early 1990s was largely pre-occupied with probing in the dark, just to establish what had happened in 1918 and whether this was important historically.

Thus, in 1998 Nancy Bristow provided a pioneering gendered reading of medical treatment in the USA in 1918, concluding that the overwhelmingly female nursing profession came through the epidemic with their heads held high at being able to meet the ideals of their largely feminine profession (viz. caring for the sick), quite unlike the predominantly male medical profession whose ideal of defeating disease had taken a very severe blow. ‘For many doctors the epidemic would always remain the low point in their professional lives,’ she concluded, while many nurses experienced it as ‘a meaningful opportunity for service that only enhanced their confidence as women and as nurses’.⁴⁶

World (Lewiston: Edwin Mellen Press, 1992), 10; G. Rice, *Black November: The 1918 Influenza Pandemic in New Zealand* (Christchurch: Canterbury University Press, 2005), 205; N. P. A. S. Johnson, *Britain and the 1918–19 Influenza Pandemic: A Dark Epilogue* (London and New York: Routledge, 2006), 105.

⁴⁴D. Hardiman, ‘The Influenza Epidemic of 1918 and the *Adivasis* of Western India’, *Social History of Medicine*, 2012, 25, 644–64; S.-E. Mamelund, ‘Geography May Explain Adult Mortality from the 1918–20 Influenza Pandemic’, *Epidemics*, 2011, 3, 46–60; S.-E. Mamelund, ‘Influenza-Associated Mortality during the 1918–1919 Influenza Pandemic in Alaska and Labrador: A Comparison’, *Social Science History*, 2013, 37, 177–229; S.-E. Mamelund, ‘Spanish Influenza Mortality of Ethnic Minorities in Norway 1918–1919’, *European Journal of Population*, 2003, 19, 83–102.

⁴⁵The two case studies are: J. M. Barry *et al.* ‘Cross Protection between Successive Waves of the 1918–19 Influenza Pandemic: Epidemiological Evidence from US Army Camps and from Britain’, *Journal of Infectious Diseases*, 2008, 198, 427–34; and Pearce *et al.* ‘Understanding Mortality in the 1918–1919 Influenza Pandemic’. A consideration of the ‘rurality’ effect is to be found in K. McSweeney *et al.* ‘Was Rurality Protective in the 1918 Influenza Pandemic in New Zealand?’, *New Zealand Medical Journal*, 2007, 120, 1–6; and H. Nishiura and G. Chowell, ‘Rurality and Pandemic Influenza: Geographic Heterogeneity in the Risks of Infection and Death in Kanagawa, Japan (1918–1919)’, *New Zealand Medical Journal*, 2008, 121, 18–27.

⁴⁶N. Bristow, ‘“You can’t do anything for influenza”: Doctors, Nurses and the Power of Gender during the Influenza Pandemic in the United States’ in Phillips and Killingray, *The Spanish Influenza Pandemic*, 68, 69.

Through a similar gender- and class-sensitive reading of the non-medical experience in Winnipeg in 1918, Jones highlights the agency of women of different classes in countering, on their own terms, the dire social effects of the epidemic on family and community life, while Foley's study of the fear (both real and imagined) which the epidemic generated demonstrates further dimensions—the emotional and the psychological—which a social history approach adds to our attempt at a holistic understanding of what the pandemic meant to those who lived through it and those who lost loved ones to it.

In another way too, Foley's work represents a push beyond existing boundaries, viz. geographically, as it is the first history of the 'Spanish' flu in Ireland.⁴⁷ Since 1998 there has been a marked increase in the number of countries where the pandemic of 1918–1919 has come under scholars' gaze, especially in Latin America and the Iberian Peninsula.⁴⁸ Indeed, at the Basque Museum of the History of Medicine in Spain, Anton Erkoreka mounted a special project on the history of the 'Spanish' flu in the Basque country, which, by 2006, had yielded 23 local studies on which he was able to draw for his *La Pandemia de Gripe Española en El País Vasco* (2006).⁴⁹ One wonders how many of the works on the flu in Spain were embarked on because of the inaccurate label 'Spanish' attached to the pandemic.

Yet, even with this welcome expansion of the geographical compass of the historiography of the pandemic of 1918–1919 over the last decade and a half, its arrival, course and impact in several major regions of the world still remain relatively unknown, in particular in India, the Chinese interior and South-East Asia, the Middle East and North Africa, Central and West-central Africa, Eastern and South-eastern Europe and in Russia.

Not only has the geographical coverage increased since 1998, but also the geographical and spatial analysis of the pandemic. Kevin McCracken and Peter Curson, Niall Johnson and Rosalind Eggo have used an array of mathematical tools to plot the epidemic's diffusion in time and space within, respectively, one city (Sydney), one country (Great Britain) and two countries (England and Wales and the USA).⁵⁰ Putting this information onto time-series graphs and maps shows the inexorable spreading of the disease in 1918 and vividly demonstrates hierarchies of infection at work both locally and nationally. *Inter alia*, this allows the likely modes of transmission to be identified with greater accuracy.

In Matthew Smallman-Raynor and Andrew Cliff's analysis of *War Epidemics: An Historical Geography of Infectious Diseases in Military Conflict and Civil Strife, 1850–2000* (2004), the 'Spanish' flu features thrice, exemplifying the roles of military camps in the 'kindling and

⁴⁷C. Foley, *The Last Irish Plague: The Great Flu Epidemic in Ireland 1918–19* (Dublin and Portland: Irish Academic Press, 2011). Two other recent doctoral theses on the flu epidemic in Ireland, by Patricia Marsh, 'The Effects of the 1918–19 Influenza Pandemic in Ulster' (Queen's University, Belfast, 2010) and by Ida Milne, 'The 1918–19 Spanish Flu Epidemic in Leinster' (Trinity College, Dublin, 2011) have not yet been published.

⁴⁸For Latin America, for example: C. M. Cruz de Sousa, *A Gripe Espanhola na Bahia* (Rio de Janeiro: Edufba, 2009); L. M. Bertucci, *Influenza, A Medicina Enfermo... São Paulo* (Campinas: Unicamp, 2004); C. B. Filho, *A Gripe Espanhola em São Paulo, 1918 Epidemia e Sociedade* (Rio de Janeiro: Paz e Terra, 2003); J. Torres Silveira,

A Influenza Espanhola e a Cidade Planejada—Belo Horizonte 1918 (Belo Horizonte: Argumentum, 2008); H. A. Maureira, "'Los Culpables de la Miseria: Poverty and Public Health during the Spanish Influenza Epidemic in Chile 1918–1920' (PhD thesis, Georgetown University, 2012).

⁴⁹A. Erkoreka, *La Pandemia de Gripe Española en El País Vasco* (Bilbao: Museo Vasco de Historia de la Medicina, 2006).

⁵⁰McCracken and Curson, 'Flu dowunder'; Johnson, *Britain and the 1918–19 Influenza Pandemic*; R. Eggo et al. 'Spatial Dynamics of the 1918 Influenza Pandemic in England, Wales and the United States', *Journal of the Royal Society Interface*, 2011, 8, 233–43.

acceleration and spatial transmission of epidemic events', of off-duty soldiers in infecting civilians and of demobilisation in spreading the pandemic across the oceans. As the authors state in their preface, 'We have been concerned to emphasize the locational variable both in describing spatial patterns and in examining the dynamics by which diseases, entrained by war, have moved from one geographical area to another.'⁵¹

Their memorable phrase 'entrained by war' and their classification of 'Spanish influenza' as a war epidemic par excellence—'epidemics of infectious diseases arising as a consequence of war'—underline one of the biggest questions facing historians of the pandemic and of World War I, viz. how far were the two connected?⁵² Until very recently, historians of the war have been reluctant even to consider this matter—in 2004 a leading historian of the First World War was still of the opinion that the pandemic's 'incidence was not directly linked to the conflict'—although a flu historian, Patrick Zylberman, had begun to engage with this knotty issue already in the 1990s, arguing that the first total war in history significantly influenced the pandemic's effect on both soldiers and civilians as it left no one in France untouched by the ripples of the mobilisation of society, not least in the way it drained the civilian sector of medical and nursing resources, to civilians' detriment when the flu struck.⁵³

However, it is in the twenty-first century that the relationship between the Great War and the Great Flu has begun to come under closer scrutiny, particularly as a result of deeper exploration of military records.

Breaking the big question into three, these holistic historians of hostilities have inquired, first, how far the war was responsible for the mutation of a mild flu virus into a killer; secondly, how far it was responsible for the virus' dissemination; and thirdly, how far the killer virus affected the conduct and even outcome of the war.

That it is at present impossible to answer the first question about mutation definitively has not stopped some of these authors from asserting what logic, circumstantial evidence and a little knowledge of the effects of repeated passaging seem to indicate, viz. that the pandemic, in Anton Erkoreka's words, 'appears to be inextricably linked to the soldiers who fought during the First World War. The millions of young men in army barracks, military camps and trenches constituted the vulnerable substrate on which the influenza virus developed, became extremely virulent and spread worldwide ...'⁵⁴ Whether this view would include those working in wartime industries under cramped and stressful conditions too does not seem to have been considered yet.

⁵¹M. R. Smallman-Raynor and A. D. Cliff, *War Epidemics: An Historical Geography of Infectious Diseases in Military Conflict and Civil Strife, 1850–2000* (New York: Oxford University Press, 2006). The first quote is on p. 413, the second on p. x.

⁵²Smallman-Raynor and Cliff, *War Epidemics*, ix.

⁵³On the absence of a direct link between the war and the pandemic, see, D. Stevenson, *1914–1918: The History of the First World War* (London: Allen Lane, 2004), 498. Eight years later, however, he had come to recognise that there may indeed have been a close connection—see D. Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (London: Penguin, 2012), 91, 162, 251, 347, 514–15. The most substantial examples of this dawning awareness of a likely link between the flu pandemic and the First World War are to be found on two websites currently

under construction ahead of the centenary of the war—see Ute Daniel et al., eds, *1914–1918-online. International Encyclopedia of the First World War* (Freie Universität Berlin and Bavarian State Library, in progress) at <<http://www.1914-1918-online.net>> accessed on August 2014 and *World War I Centenary—Continuations and Beginnings* (University of Oxford, JICS), especially 'Body and Mind', at <<http://ww1centenary.oucs.ox.ac.uk/body-and-mind/agent-based-model-the-spanish-flu/>>; see also, Zylberman, 'A Holocaust in a Holocaust', 191–201.

⁵⁴A. Ekoreka, 'Origins of the Spanish Influenza Pandemic (1918–1920) and its Relation to the First World War', *Journal of Molecular and Genetic Medicine*, 2009, 3, 193. See too Price-Smith, *Contagion and Chaos*, 62; Barry, *The Great Influenza* (2004), 178 and 193; C. R. Byerly, *Fever of War: The Influenza Epidemic in*

On the second question, there is little doubt among scholars of all stripes that the movement of vast numbers of troops across land and sea was critical to the spread of the virus. In many countries, as geographers have shown, the pandemic's progress can be tracked simply by plotting where soldiers disembarked from troop trains and troopships. By doing just this, Mark Humphries, for instance, has demonstrated that the mobilization of Canadians for a Siberian Expeditionary Force in 1918 'was the greatest single factor in the diffusion of the disease' in that country.⁵⁵ 'Like an invading army ravaging a foreign country', he writes, 'recruits from the SEF spread the disease to the towns they passed through on their way west.' '[B]oth the chronology and physical path of the pandemic was largely determined by decisions made by the Canadian military'.⁵⁶

The third question about the flu and warfare is one that is all too easy to answer superficially, based on a combination of hindsight and self-justifying memoirs written by defeated generals.⁵⁷ Only Carol Byerly has systematically analysed the first part of the question (i.e. the role of the pandemic in the conduct of the war) in any depth, sensibly limiting herself at this stage to the experience of one army in the decisive final battle on the Western Front in 1918. Within this limited frame, she argues, the impact of the pandemic was momentous. Her model, well-based analysis now needs to be replicated for the armies of all the protagonists if we are to tackle the second part of the question (i.e. the role of the pandemic in the outcome of the war) with any confidence.

The thrust of all these works on the war–pandemic relationship is readily apparent from their use of phrases like 'inextricably linked', 'fused symbiotically', 'fateful alliance' and 'a product of the pernicious ecology of war'.⁵⁸ Not surprisingly, none of these historians has concluded that the war and the flu were unconnected. I can reduce this issue to two propositions for critical debate, as in an undergraduate history exam paper:

Question 1: 'No Great War, no "Spanish" flu'. Discuss.

Question 2: 'No "Spanish flu", no defeat of Germany'. Do you agree? Give reasons for your answer.

Confronted by such direct questions, the contemporary press in the belligerent countries would have given a curt 'no' to both, for their super-patriotism and wartime censorship would not have allowed such counterfactual possibilities to be entertained. This raises the question of how the 1918–1919 influenza pandemic was portrayed in the media, which is still a fledgling topic for historians, even though contemporary newspapers have been a

the U.S. Army During World War I (New York: New York University Press, 2005), 8, 71, 74; Oxford *et al.*, 'A Hypothesis'.

⁵⁵M. O. Humphries, 'The Horror at Home: The Canadian Military and the "Great" Influenza Pandemic of 1918', *Journal of the Canadian Historical Association*, 2005, 16, 252. Humphries' doctoral thesis on this topic has just been published as *The Last Plague: Spanish Influenza and the Politics of Public Health* (Toronto: University of Toronto Press, 2013).

⁵⁶Humphries, *The Last Plague*, 254. For similar conclusions see Smallman-Raynor and Cliff, 397–408,

579–593, 664–677; Phillips, *'Black October'* (1990), chs. 2, 3, 5.

⁵⁷For example, Price-Smith, *Contagion and Chaos*, 68–76.

⁵⁸'[I]nextricably linked': Byerly, *Fever of War*, 8; 'fused symbiotically': R. Brown, 'The Great War and the Great Flu Pandemic of 1918', *Wellcome History*, October 2003, 24, 6; 'fateful alliance': R. J. Brown, 'Fateful Alliance: The Influenza Pandemic of 1918 and the First World War, in the British Context' (Ph.D thesis, University of Syracuse, 2006); a product of the pernicious ecology of war': Price-Smith, *Contagion and Chaos*, 62.

major source for them and, indeed, were the originators of the label 'Spanish' for that epidemic. A communications scholar and ex-journalist, Debra Blakely, did begin probing this question in her *Mass Mediated Disease—A Case Study Analysis of News Reporting and Three Influenza Pandemics and Public Health Policy* (2007) by focusing on the reporting of the epidemics of 1918, 1957 and 1968 by the *New York Times*, *The Times* (London) and a number of magazines.⁵⁹ Not unexpectedly, she found that the three epidemics were framed differently, reflecting the changed state of medical knowledge at the time, but how far these depictions shaped contemporary public health policy seems to me to require far more investigation to establish a convincing link. *Post hoc* is not necessarily *propter hoc*.

More immediately illuminating is the 64-page section of Marc Hieronimus' doctoral thesis at the University of Cologne, investigating how the press in Marseilles, Manchester and Cologne treated the 1918 epidemic.⁶⁰ Sub-sections on censorship, ignorance and humour promise a more insightful analysis of the contents of the columns. Given the centrality of newspapers to any account of twentieth-century epidemics, the scope for critical studies of the media—what it contained and what it did not, how it presented this material, whose opinions it voiced and whose not, and how its contents were received by readers—offers rich opportunities for much more inquiry.

This is certainly what cultural histories of the pandemic which have recently begun to appear recognise, for they analyse closely the discourse about the 'Spanish' flu in the press, in family stories and in folklore.⁶¹ Doing this has made them realise that different meanings were attached to the apparently neutral label 'flu' by contemporaries and that each of these offers a telling lens on the social and political culture of the day. In the words of one of these authors, 'Flu ... is a palimpsest that draws on the social, cultural and historiographical materials available to it.'⁶² Very clearly, to them microbes have not only scientific but also metaphorical meaning.

What these works focusing on the press do underline too is the value of comparative studies of influenza epidemics, whether diachronic or synchronic, if only to show up more clearly what was distinctive about one epidemic as against another (let alone how the viral agent in one was or was not superseded by another) or of how and why one society coped better or worse with the disaster than another. '[A] full comprehension of any pandemic requires crossing the boundary of time', insists one of the few comparative studies of influenza pandemics.⁶³

In general terms, the historiography of influenza pandemics needs to move beyond (or at least to be aware of what lies beyond) national boundaries. It is telling of where the historiography was 15 years ago that Mueller's 49-page bibliography of the 'Spanish' flu compiled

⁵⁹D. E. Blakely, *Mass Mediated Disease—A Case Study Analysis of News Reporting and Three Influenza Pandemics and Public Health Policy* (Lanham: Lexington Books, 2007).

⁶⁰M. Hieronimus, 'Krankheit und Tod 1918: zum Umgang mit der Spanische Grippe in Frankreich, England und in dem Deutschen Reich' (Ph.D thesis, University of Cologne, 2006).

⁶¹For cultural histories of the pandemic, see, M. Honigsbaum, *A History of the Great Influenza Pandemics: Death, Panic and Hysteria 1830–1920*

(London and New York: I.B. Tauris, 2014); R. A. Davis, *The Spanish Flu: Narrative and Cultural Identity in Spain, 1918* (New York: Palgrave Macmillan, 2013); M.-E. Kelm, 'Flu Stories: Engaging with Disease, Death, and Modernity in British Columbia, 1918–19', in Fahrni and Jones, *Epidemic Encounters*.

⁶²Honigsbaum, *Great Influenza Pandemics*, 4.

⁶³D. L. Adams, 'Putting Pandemics in Perspective: England and the Flu, 1889–1919' (PhD thesis, University of Kansas, 2008), 26.

in 1999 had just $1\frac{1}{4}$ pages of 'global studies' and $47\frac{3}{4}$ of national ones. I suspect that such a bibliography compiled today would not be very different in the ratio of global:national works, though several of the chapters in Giles-Vernick and Craddock's *Influenza and Public Health* may be straws in a more comparative, globalised wind.⁶⁴

Employing a longitudinal rather than a comparative lens, historians of medical science per se now see the 'Spanish' flu as looming very large in the making of the new disciplines of epidemiology and virology in the interwar years. As Michael Bresalier argued in his doctoral thesis, the 'viralizing' of influenza in the 15 years after the pandemic played a major role in the creation of virology in Britain. He considers that 'virus concepts were the product of a contested history that involved the negotiation of a new medical consensus on flu's identity.'⁶⁵ In other words, not only was influenza a social construct; it was also a medico-scientific one. To which, John Eyler would specifically add, a changing epidemiological construct too. He is the author of a chapter on 'Influenza and the Remaking of Epidemiology' in *Influenza and Public Health* and also of one of several recent examinations of the desperate but vain attempts by medical science in 1918–1919 to identify the causative pathogen and come up with a medical antidote to it.⁶⁶

All of this suggests that the protean character of the influenza virus in nature is paralleled by an equally protean character in the human mind too, as cultural historians of the pandemic have argued. How these changes in the conceptualisation of flu through different disciplinary lenses were subsequently translated into medical training and then everyday medical practice would make an intriguing study in its own right.

So too would an examination of changing non-medical conceptions of influenza over time. How did laypeople of all classes, male and female, old and young, understand the disease in say, 1813, 1913 and 2013? How did they make sense of its periodic escalations into deadly epidemics? For most, their religion would have given answers, so an investigation into changing religious explanations of flu epidemics must be a high priority.⁶⁷

Not that those who survived epidemics could deal with mass deaths purely intellectually. How did they cope emotionally, psychologically, materially and socially with the death of a spouse, a child or a parent? What was the fate of the millions of widows and widowers and the hundreds of millions of orphans suddenly created by a pandemic like the 'Spanish' flu? The massive personal implications of such losses are hinted at by two cases from South Africa:

⁶⁴Especially ch. 2 (E. Rodriguez-Ocaña, 'Barcelona's Influenza: A Comparison of the 1889–1890 and 1918 Autumn Outbreaks'), ch. 5 (Sylvie van der Werf, 'Past Influenza Epidemics and Implications for Contemporary Influenza Research') and ch. 8 (Tamara Giles-Vernick, Susan Craddock and Jennifer Gunn, 'Mobility Restrictions, Isolation and Quarantine: Historical Perspectives on Contemporary Debates').

⁶⁵M. Bresalier, 'Transforming Flu: Medical Science and the Making of a Virus Disease in London, 1890–1939' (PhD thesis, University of Cambridge, 2010), 5.

⁶⁶J. Eyler, 'Influenza and the Remaking of Epidemiology, 1918–1960', in Giles-Vernick and Craddock, *Influenza and Public Health*, ch. 6. J. M. Eyler, 'The Fog of

Research: Influenza Vaccine Trials during the 1918–19 Pandemic', *Journal of the History of Medicine and Allied Sciences*, 2009, 64, 401–28; L. Loeb, 'Beating the Flu: Orthodox and Commercial Responses to Influenza in Britain 1889–1919', *Social History of Medicine*, 2005, 18, 203–24; E. Tognotti, 'Scientific Triumphalism and Learning from Facts: Bacteriology and the "Spanish Flu" Challenge of 1918', *Social History of Medicine*, 2003, 16, 97–110.

⁶⁷One of the very few recent works to have done so is D. Simmons, 'Religion and Medicine at the Crossroads: A Re-Examination of the Southern Rhodesian Influenza Epidemic of 1918', *Journal of Southern African Studies*, 2009, 35, 29–44.

1. A flu widow wrote as follows to the 'Intercession Sought' column of a religious magazine in July 1919 (translated from Dutch):

My dear husband died of flu, leaving me with 5 children in poverty and debt. Pray for me for acceptance and strength. I plan to go to the diamond diggings to see if I can make a living. I will give a tithe to the Lord. Ask the Lord for relief and help.⁶⁸

2. In March 1919 a young boy appeared in a Cape Town court on a charge of theft. The prosecutor described him as follows:

He is a 'flu remnant'. He has no home, and does not know what has become of his parents. He does not know his age or his proper name, and has no surname. He and others sleep under the Pier, in the old boxes, and in [empty] railway compartments, first-class preferred, when the opportunity offers. He looks half-starved and eats garbage, or whatever he can get hold of, and says he has never been to school.⁶⁹

How many million flu survivors around the world shared such wretched lives after 1918? Would such traumatised people have wanted to recall the 'Spanish' flu or would they rather have sought to put it out of their minds?

On this much-debated question of the long silence about that pandemic in both private and public circles, Fanning is convinced that in the USA it is a reflection of who determines what constitutes the nation's history. 'Institutionalized social memories are created by the privileged', she believes, and they were less affected than those with 'least access to the authoritative written word: poor military conscripts, Native Americans, laborers, and immigrants', those 'too marginalized for their experience to earn a place in America's collective memory'.⁷⁰ In the same vein, argues Foley, the most severely hit lower classes in Ireland 'had no one to fight for their remembrance' of the epidemic's ravages within their ranks.⁷¹

Byerly and Price-Smith are of the opinion that such suppression of the past was a deliberate conspiracy of silence by military and medical authorities after 1918 so as not to publicise their rout by a virus. Medical officers therefore 'chose to dismiss the epidemic as a meaningful medical or military event', writes Byerly.⁷² Following these 'cues from hundreds of war memoirs and official medical histories that efface the role of disease in modern warfare, historians have relegated the worst epidemic in modern history to the sidelines of human history'.⁷³ While this rather underestimates the range of sources usually consulted by historians and downplays the intellectual reasons for historians' long silence, it certainly does explain why, in the aftermath of the First World War, medical histories of the war were so exiguous in what they said about the influenza pandemic. For instance, the *Casualties and War Statistics* volume of the official British *History of the Great War* (1931) announced: 'Apart from reproducing ... the recorded figures for influenza in the British armies at home and abroad during the Great War little need be said about this disease.'⁷⁴

⁶⁸Cited in Phillips, *'Black October'*, 188 (translated from Dutch).

⁶⁹Cited in Phillips, *'Black October'*, 186–7.

⁷⁰Fanning, *Influenza and Inequality*, 127, 128.

⁷¹Foley, *The Last Irish Plague*, 150.

⁷²Byerly, *Fever of War*, 156.

⁷³Byerly, *Fever of War*, 188.

⁷⁴Cited in Phillips and Killingray, *The Spanish Influenza Pandemic*, 13.

The long-term cost of such suppression of memories could be high, observed Bristow recently in her assessment of ordinary people's experience of the epidemic. 'As upbeat [post-war optimism] suppressed the voices of trauma, many Americans were left to suffer in silence, their suffering likely deepened by that very silence.'⁷⁵ How and why people remember (or forget) their past 'has real, lived consequences'.⁷⁶ Indeed, Susan Kent has gone so far as to argue that such unresolved trauma as a result of the First World War and the 'Spanish' flu pandemic was decisively formative for British political culture between the wars. She believes that 'The political force of emotions ... particularly those associated with loss and mourning, leading to post-traumatic stress disorder—must be appreciated if we are to truly grasp the political history of Great Britain in the first decade of the interwar period'.⁷⁷

However, big psychological issues such as these must be probed not just in the USA and Britain, but globally, if the full effect of the pandemic is to be weighed without privileging the experience of North America and Europe, as is presently the case in 'Spanish' flu historiography. In Mueller's bibliography, just over half the entries focus on the 'Spanish' flu in countries in these two continents.

Conclusion

While many questions about the nature of the H1N1 virus and its lethality have now been answered, the identity of its progenitor and how, why, when and where it emerged and mutated are still a puzzle. What role the First World War played in this—if any—and what its part was in the development of the first and second waves of 'Spanish' flu remain to be ascertained, as does the reverse, that is, whether the pandemic itself contributed significantly to the failure of Germany's Spring Offensive in 1918 and its subsequent retreat from its positions on the Western Front. Equally important to establishing the full extent of the pandemic's effect is the need to examine its deadly trail beyond Western Europe and North America, especially in Asia, North and Central Africa and the Middle East. Doing this will make it easier to understand, to the fullest extent, the transnational character and connections of the 'Spanish' flu. This, in turn, will allow historians to determine more clearly its common social, emotional and psychological impact across the world at the level of families, orphans and individuals. Though grief cannot be measured, the number of those grieving can, while how such grieving influenced their lives subsequently can, at least, be recognised. As one 90-year-old man who had lost his mother to the 'Spanish' flu 80 years earlier told me in 1998, 'She died in 1918 and I have missed her ever since'.⁷⁸

Postscript: A New Stimulus?

The coming centenary of this pandemic in 2018, occurring as it will at the climax of the centenary of the First World War, will almost certainly provide a fresh stimulus for scholarly inquiry by social and medical scientists (writing not just in English) into the above questions, along with other aspects of this complex, multi-sided event. From their investigations, there may well emerge a third wave of 'Spanish' flu historiography, built on the surge of the

⁷⁵N. K. Bristow, *American Pandemic: The Lost Worlds of the 1918 Influenza Epidemic* (Oxford and New York: Oxford University Press, 2012), 195.

⁷⁶Bristow, *American Pandemic*, 193.

⁷⁷S. K. Kent, *Aftershocks: Politics and Trauma in Britain, 1918–1931* (Basingstoke: Palgrave Macmillan, 2009), 4.

⁷⁸Anonymous caller on South African Broadcasting Corporation's SAFM radio programme, 'Talk at Will', 16 September 1998.

second wave of the last 15 years. How to fit this multi-lingual output into a meaningful transnational, transdisciplinary frame, as befits the worst pandemic in human history, will be the new challenge for historians of the pandemic 100 years after it occurred. Doing so will perhaps justify holding a second 'Spanish' flu conference in Cape Town.