

## Media Reviews

### Will It Come Here? Using Digital Humanities Tools to Explore Medical Understanding during the Russian Flu Epidemic, 1889–90

On December 18, 1889, the *Detroit Free Press* asked an intriguing question in the headline: ‘Will It Come Here?’<sup>1</sup> The ‘It’ in the headline was the so-called ‘Russian Flu’, an outbreak of influenza that was first noticed on a global scale in St Petersburg, the capital of Russia.<sup>2</sup> As this disease spread across Europe, American medical authorities as well as the popular press expressed increasing concern about whether the disease would cross the Atlantic and reach the United States.<sup>3</sup> To answer this question, newspaper reporters all over the country, as in this *Detroit Free Press* article, turned to local authorities, doctors and physicians from their cities, who were asked to share their opinion about influenza. In this same period, many medical journals published editorials commenting on the spread of the disease, the likely course of further development and the means for preventing or treating outbreaks. This paper examines comments by local doctors published in the *Detroit Free Press* and one editorial published in *Medical Age*, a semi-monthly journal also published in Detroit, as a way to introduce a broader research project engaged in three innovative methods that link the digital humanities and medical history: comparing medical reporting in daily newspapers and medical journals to explore connections across local, regional, national and international levels; combining traditional historical methods of close reading with new tools available for large-scale textual analysis; and developing methods that engage undergraduate students as research collaborators at every stage of the process.

A close reading of the *Detroit Free Press* article of December 18 cited above reveals the complex ways in which information about the Russian flu came to doctors, their processes for making sense of diverse information sources and their role in interpreting that information for public dissemination. The first doctor quoted in the article, Dr Donald Maclean, stated that the disease could be communicated from one person to another, and thus it might spread to Detroit, and that, while influenza was rarely fatal, it should not be disregarded. Dr T.A. McGraw was ‘somewhat skeptical’ about reports of influenza in New York City, because whenever many cases are reported in newspapers, people assume that all victims suffer from the same disease. McGraw challenged the theory that influenza microbes were blown from place to place on the grounds that ‘the general direction of the wind is from west to east, while the influenza comes here from the western world’. Instead of being carried by the wind, McGraw declared, ‘People bring it in their clothes.’ Regardless of how the disease was transmitted, according to McGraw, Detroiters should not ‘fear any epidemic of this sort’, but should ‘treat it carefully’, as even though it was ‘seldom fatal’, it was dangerous to ‘aged and sickly people’ and can even give ‘a strong man a pretty severe attack’. Finally, Detroit physician Dr B.P. Brodie had not heard of

<sup>1</sup> *Detroit Free Press*, 18 December 1889. Funding for this research was provided by the US National Endowment for the Humanities.

<sup>2</sup> Mark Honigsbaum, *A History of the Great Influenza Pandemics: Death, Panic, and Hysteria, 1830–1920* (London: I.B. Tauris, 2014).

<sup>3</sup> See the analysis of how one influential editorial shaped perceptions on a national level in E. Thomas Ewing, Veronica Kimmerly and Sinclair Ewing-Nelson, ‘“Look Out for La Grippe”: Using Digital Humanities Tools to Interpret Information Dissemination during the Russian Flu, 1889–90’, *Medical History*, 60, 1 (2016), 129–31.

any cases and, although he conceded that the disease ‘might’ break out in Detroit, he too reassured the public: ‘influenza is, at the worst, but a very troublesome and disagreeable disease’. Repeating the claim that influenza ‘very rarely proves fatal’, the newspaper did affirm that the disease ‘requires constant attention and treatment’.

Just one week later, on December 26, 1889, the *Medical Age* published an editorial under the title, ‘The Prevailing Influenza’, which provided a general account of the disease, its previous historical manifestations and specific information about its origins, causes and symptoms.<sup>4</sup> The first sentence set out both the scope of the disease and the sources of information available to the journal editors: ‘That this affection is at present epidemic and very generally distributed over the East and West is apparent from the cases reported in the medical journal and the interest manifested by the daily papers.’ This opening paragraph indicates that ‘the prevailing influenza’ is a familiar disease yet is also manifesting special traits and conditions. The remainder of this article, which includes a substantial amount of text reprinted from an editorial in the *Medical Record*, published in New York City, provided a more detailed account of the disease’s spread across Europe, some historical background on previous influenza epidemics, the likely means of transmission, a list of symptoms, recommendations for treatment and reassurance that the disease should not cause serious consequences for Detroit or the United States as a whole.<sup>5</sup>

In the course of one week, from December 18 to December 26, these two articles provided Detroiters with a sequence of authoritative statements about the prevailing influenza. A reader who looked at these two articles would probably come away with a general impression that included the following elements: that the current outbreak of influenza was more widespread than usual, although the reasons for the speed and scope of the outbreak were not known; that the disease was spread by microbes, although the path of transmission was not readily identified; and, that, although Detroit had only a few reported cases and more were expected, the disease was not likely to cause many deaths and thus was not seen by experts as a serious threat to public health. The fact that doctors and the *Medical Age* editorial attributed much of the attention to the disease to the influence of newspapers is suggestive of a self-consciousness about the complicated relationship between disease outbreaks and information transmission.

To explore the relationship between information and disease on a larger scale, historians can make use of online tools for text visualisation. The Medical Heritage Library and the Internet Archive make it possible to save the entire text of periodicals such as *Medical Age*. A ten-year run of this journal, including the five years before and five years after the Russian flu, amounts to more than five thousand pages and close to five million words, a quantity of text that would impose a great burden on an individual scholar or even a team attempting a close reading. One way to address this research challenge is through a method, such as the online Voyant tool, which quickly generates a variety of visualisations, tables and other outcomes.

Of these many options, the collocation tool is an easy way to reveal which terms appear in relative proximity to each other. By identifying terms which appear in the same phrases or sentences, this tool suggests more meaningful connections than just the term frequency revealed in a word cloud. Using two keywords related to the Russian flu, influenza and epidemic, indicates that these terms are collocated with each other approximately twenty

<sup>4</sup> ‘The Prevailing Influenza’, *The Medical Age*, 26 December 1889, 563.

<sup>5</sup> E. Thomas Ewing, Sinclair Ewing-Nelson and Veronica Kimmerly, ‘Dr Shradly Says: The 1890 Russian Influenza as a Case Study for Understanding Epidemics in History’, *Medical Heritage Library*, posted August 29, 2016.



Collocation is an example of a digital humanities approach suggestive of links and connections that require further research and analysis. The close reading of texts, as modelled in this first part of this article, is an important step for understanding how physicians, newspapers and, indeed, the public understood this epidemic in its earliest stages. Yet text visualisation tools also have great potential to identify important themes, to suggest connections and to identify possible relationships. Researchers can pursue this research on their own using a combination of full text sources in the Medical Heritage Library, text visualisations in Voyant tools and network analysis in Palladio. For students working on medical research projects, these tools combine relative ease of access and applications with the possibility of increasingly sophisticated analytical strategies that yield new insights. This approach allows scholars as well as students to appreciate the value of a digital humanities approach as well as the importance of close-reading skills to explore more fully the historical significance of an event such as an influenza epidemic.

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### **New Methods in the History of Medicine: Streamlining Workflows to Enable Big-Data History Projects**

This paper presents new methods, workflows and a project management system that we developed to reduce the resources needed for big-data history projects and thus lower the barriers to entry for other scholars. Creating datasets from handwritten documents – essentially constructing a new archive from which to investigate historical questions – shifts the traditional timeline and resource requirements of historical research. This is a double-edged sword. Once the dataset is built, researchers can use it to investigate a wide range of questions. Yet, building a dataset requires a substantial investment of resources (i.e., knowledge, time, labour and money).

We developed these new approaches, out of necessity, for the New Orleans Mortality Project (<http://nola.spatialhistory.org>), an interdisciplinary historical geographic information systems (GIS) study of the impact of disease, socio-economics and environment on community and urban development, 1877–1915. First, this paper details the workflows we developed in order to build a 50 000-record mortality database from death certificates, a 40 000-record property value database from tax ledgers and city-wide population datasets from city directories. Second, the paper explains the project management system we created to foster efficient and accurate database creation by undergraduate students. Developing these workflows and project management techniques made the large scope and depth of the project possible. Third, this paper presents the results of this project management approach and discusses the broader implications of these findings. Methodological innovations and lessons from this project can be incorporated into a large variety of other digital history projects.

Like many nineteenth-century administrative records, the state and city death certificates and the Orleans Parish Assessor's records presented two challenges for digitisation: script handwriting and a variety of hands (from different recorders). Advances in optical character recognition (OCR) continue to unlock historical records for further analysis; however, OCR remains severely limited when working with script handwriting. Extensive