

## *Media Reviews*

### **Teaching and Researching the History of Medicine in the Era of (Big) Data: Reflections**

We began this series by highlighting the ample rhetoric about the utility of new methods that have emerged from the digital humanities, and the challenges of understanding exactly how and when various methods can be applied to research and teaching. The contributions to this series demonstrate such methods and applications while also raising important questions and concerns. In doing so, they move us beyond the rhetoric to a new historiography infused by critical engagement with innovative and evolving digital methods. More concretely, the contributions to this series force us to think anew about how we research, write and teach history in the digital age, without betraying traditional methods but by enhancing them with new approaches that help the field remain meaningful and impactful.

Scholars who are engaging the digital humanities for research and teaching now routinely appear in the programmes of annual professional conferences. This trend towards greater interdisciplinarity – as well as the interplay of research and teaching – must continue in the field of the history of medicine to ensure that it remains relevant and vibrant in the twenty-first century. At the same time, we should not see digital humanities as a distinct or separate field that necessarily requires its own conference panels or sections in journals. This series has shown how, rather than paying attention to any kind of data or method, scholars are, first and foremost, doing important research into the history of medicine. Indeed, we hope scholars will adopt, adapt and integrate whatever aspects of digital projects might aid their own work, independent of any affiliation with digital humanities as a label.

Innovation in any industry, particularly in the academy, happens through collaboration and willingness to exchange and adapt new ideas, methods and approaches. It also involves, at times, the willingness to take risks and to lead in a direction where some are reluctant to follow. The contributors to this series demonstrate this willingness with creativity and noteworthy results in both research and teaching. The field will be stronger as a result of these and related initiatives and, along the way, the students of these scholars may even be inspired to pursue advanced studies of history using combinations of traditional and digital methods, some of which have not yet been conceived. Such an outcome would be a result, in part, of embracing the digital humanities. Would that be such a bad thing? It is not always an easy question. Digital humanities can seem like a subversive force that implicitly seeks to undermine important scholarly conventions – a trend therefore to be resisted. But this series has indicated how seamlessly traditional and digital scholarly approaches work together, and, crucially, on relatively small scales.

Projects aligned with the digital humanities often feature large, multi-disciplinary teams spanning multiple institutions. While such configurations can provide unique methodological and historical research results, this is only one of many possible approaches. Our series contributors have shown how individual scholars, perhaps with a few like-minded collaborators or a digitally inflected course, can bring digital methods and approaches to bear on important traditional research questions in the history of medicine.

We cannot allow ourselves to be too easily seduced by the sexy project website and complex collaborations, a seduction that would cause us to overlook the nitty-gritty work necessary to prepare and analyse difficult sources – the stuff that makes digital history possible and exciting at any scale.

Indeed, possibly the greatest potential of approaches from the digital humanities lies not in large, collaborative and expensive projects, but in what we might call a ‘passive collaboration’ characterised by methodological transparency, shared datasets, willingness to experiment and deliberate engagement with actual and potential limitations of digital methods. Together, we can accomplish over time much more than any big, expensive (and finite) project can. The future of digital history does not lie solely in scale, complexity and interdisciplinarity. For almost everyone, it is about doing what we like to do as scholars, mostly on our own, while participating in a larger scholarly effort. Our authors have shown a way forward with largely independent projects that, nevertheless, make significant contributions to much larger, intriguing and significant historical questions that remain unanswerable given the present digital state of the historical record. We hope that the preceding demonstrations encourage others to experiment as individual scholars as well and to consider how digital work can easily engage with future projects and unlock new kinds of historical inquiry.

The humanities have proved rather adaptable over the centuries, and it can seem inevitable that methods and values of digital humanities will naturally come into balance with fields such as the history of medicine. To some trivial extent this is true. It is a foregone conclusion that digital research methods and new publication models will increasingly find their way into history of medicine research and knowledge production practices in the digital age. Therefore the question of whether it will happen is not nearly as interesting as the questions of how and why.

It is extraordinarily easy to misapply digital methods and draw inappropriate conclusions. It is equally easy to put technical wizardry ahead of sound historical methodology, or even common sense. The resulting risk, therefore, is to discard the baby with the bathwater and reject the digital humanities outright as anti-humanistic and to wait for the whole thing to blow over. Yet every approach to historical interpretation has its own limitations; inherent difficulties with data, quantitative analysis or visualisations are not reasons to brush off emergent digital methods or pedagogical approaches, but one should engage them with the critical rigour that has remained a hallmark of historical scholarship for many decades. Not only must we actively shape the convergence of traditional and digital methods, we must also embrace the opportunity to reassess why we do what we do as historians of medicine and the best way of achieving those aims, both in our scholarship and in the classroom.

While the research projects featured in this series certainly have come to their own important conclusions, we also hope that they have provided some inspiration and concrete examples for those curious about the utility of digital methods in the history of medicine. Perhaps most importantly, we hope that they will stimulate additional reflection on how appropriate digital approaches can be continually applied, refined, reframed and reused across the many fascinating research questions that continue to make the history of medicine such a relevant and important field. We look forward to this further conversation, and we encourage interested colleagues to be in touch with us about their own engagement with digital methods, to share their excitement and to join with us in building and sustaining what is already a dynamic, global community of like-minded and mutually supportive historians.

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### **Digitizing Doctors: Methodologies for Creating a Database from Historical Directories of Physicians**

Medical directories are rich sources of historical information about the medical profession. However, the labour required to extract information from them as printed text has limited their usefulness to historians of medicine who could more readily delve into their hundreds of thousands of entries in a digital database format. These directories consist of a list of physicians, usually including information such as their professional and speciality affiliations, and historians have used them to explore the structure of the medical profession and the emergence of specialisations. Despite the directories' widespread availability, the difficulty and inefficiency of using these sources has limited both the number of historians using them and the number of physicians included in studies. Here I describe a process for creating a database of physicians from a historical directory to provide historians with easier access to these data.

For historians of physician professionalisation, education and specialisation in the United States and Canada, the *American Medical Directory (AMD)* is a particularly promising resource because of its completeness and the regularity of its editions. Purporting to list all the registered physicians in those countries and their territories, the American Medical Association (AMA) published the first *AMD* in 1906, with new, updated editions following every two to three years. Although historians often spend time discovering and compiling data, the *AMD* represents a unique opportunity whereby nearly complete data have already been compiled and are ready for analysis. The information included about each doctor changed in nearly every edition, but physicians' addresses (both home and office), their medical school and year of graduation, their year of licensure, their speciality affiliations, their military affiliation (if any) and their birth year were reliably listed. Other details of their practice, such as their hours and hospital or medical school appointments, also regularly appeared. Currently, scholars have to comb through tens of thousands of records in print *AMDs*, counting and collating figures, to reach statistical conclusions about historical physicians and their practices. However, if these directories were made available in a database format, information from historical *AMDs* could be queried almost instantaneously, leaving time for more in-depth and complementary analyses involving a wider range of physicians. Additionally, the greater completeness of the data would allow for the study of subsets of the medical profession, such as rural, female or immigrant physicians.

The method of manually counting or entering data by hand from medical directories has limited historians' research to samples of physicians in hand-picked cities. Using the *AMD*