

DIGITAL HISTORY

How Digital Technology is Transforming the Study of History

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Abstract

The University of Zurich is developing a Digital Society Initiative (DSI) to engage with the impact of digital technology on all societal spheres, including history and other disciplines dealing with the past. The Department of History welcomes the DSI and fully supports it. This document explains why the digital revolution should be studied historically; how it is affecting both our discipline—especially its research methods and teaching skills—and also public understandings of the past; and how the Department of History can continue to contribute to the Digital Society Initiative through the establishment of a new Digital History Lab (DHL).

1 The UZH Digital Society Initiative

Digital History has a key role to play in the UZH Digital Society Initiative. The emerging promises and problems of contemporary society—Big Data, surveillance, privacy, access rights, the circulation and re-appropriation of cultural artefacts (texts, numbers, pictures and sound), and other new forms of digitally mediated social interaction—demand a deeper historical understanding of their social, political, cultural, economic and epistemic dimensions.

At the same time, digital technologies are profoundly transforming both the research environments and teaching methods of history as a discipline, and the contemporary representations of history in archives and exhibitions, in print and digital media and in school didactics. The ways in which digital technologies shape processes of archiving and curating cultural heritage have impacted on academic and public understandings of history. In analysing and reflecting on the present and future implications of the digital revolution in a collaborative and interdisciplinary way, Digital History speaks to some of the DSI's central concerns.

2 Digital Technologies are reshaping historical data and infrastructure

Data are the starting point of what we know about the past. But data have to be generated (collected, compiled, stored, mined or interpreted) and the conditions of evolving, processing and accessing historical data turn out to be remarkably susceptible to historical change (Gitelman 2013). We urgently need to develop a history and theory of data (small and big) in the past in order to understand data and its infrastructures in the present.

Cultural norms (e.g. property or privacy) and cultural techniques (e.g. modelling, simulating, programming, hacking, image and text interpretation, or writing practices) are fundamentally challenged by binary code, by hypertext, by collaborative working environments or machine learning (Manovich 2013, Moretti 2013). Digital technologies are shaping a new ecosystem that challenges traditional norms of knowledge formation and circulation (Star 1995). The discipline of History and especially some of its sub-disciplines (e.g. History of Knowledge and Media History) offer scholars a variety of methods to study the epistemology of data and socio-technological relations in Digital Societies. But even as History offers scholars new ways of understanding the digital revolution, the language of New Media also challenges historians to revise and rethink methods of source analysis and research presentation.

3 Digital Technologies are transforming historical methodologies

3.1 Digital Technologies have changed the historian's basic toolkit

Primary sources are the 'raw' data of historians and indispensable to their work. In many cases, primary sources—reports, letters, visual representations, and so on—are to be found in public and private archives, sometimes in geographically remote locations. But in the last two decades, major digitization projects around the world have led to key source collections and in some cases entire archives being made accessible online. Examples include:

- Newspaper digitization programmes, e.g. the National Endowment for the Humanities and the Library of Congress's collaboration to publish historical newspaper collections from the United States, 1789-1924 (<http://chroniclingamerica.loc.gov>);
- The online publication of major public archives, e.g. the National Archives of Japan's Japan Center for Asian Historical Records (<https://www.jacar.go.jp>), or the digitalization of nearly 200,000 criminal cases in the Proceedings of the Old Bailey (London), 1764-1913 (<https://www.oldbaileyonline.org>);
- The construction of metadata aggregators, such as Trove (Australia), in order to collate multiple catalogues and databases (<http://help.nla.gov.au/trove/using-trove/getting-to-know-us/trove-is>).

These new tools mean that a historian is often able to begin basic archival work from home, identifying key sources and thus saving important time and money 'in the field'. But the extent of digitization can also blind historians to archives and sources that remain off-line, whether due to government sensibilities (e.g. in the case of migration records in Japan), or lack of digitization funding (e.g. in the case of archival collections in Nigeria, Asogwa 2011), or because some 'documents' cannot easily be digitized (e.g. in the field of material culture or performance). Thus, a key component of Digital History research—and one of the ways in which our methods are being rethought—is also the identification of digital *silence*: that is, the ability to recognise what historical voices have been overlooked in the digital revolution, and why—even as we exploit the historical potential of new technologies to the full.

3.2 Digital Technologies have stimulated new research practices

Concomitant with digitization and the development of new search engines has been the ability for historians to trawl thousands of documents at the click of a button, and thus to develop new types of meta-analyses (Graham, Milligan et al 2016). In many cases, the

manpower required to do manual searches of the archives in a pre-digital age would have made such analyses inconceivable. In this sense, digital technologies have profoundly changed the types of research questions that historians are able to ask of their basic sources (e.g. research focused on the reconstruction of large social networks through Big Data analysis). At the same time, digital platforms enable historians to present the results of huge research projects in a user-friendly way, thus allowing future historians and the general public to conduct their own research (e.g. <http://slavevoyages.org>, a database with details of almost 36,000 slaving voyages, which enables users to search both for particular individual slaves and also to engage in statistical analysis). Some of the most cutting-edge research in digital history combines big data with Geographic Information System (GIS) mapping (J. B. Owens et al, 2014; Gregory 2014), thus facilitating the visualization of historical events and places in an entirely new way (Ethington 2007). GIS offers historians new perspectives on understanding topics as wide ranging as the 1760-61 Slave Revolt in Jamaica (Brown 2016), everyday life in early-twentieth century Harlem (Robertson 2016) or connectivity across the Roman Empire (<http://orbis.stanford.edu>).

Historians are also beginning to focus on what new technologies mean for the very writing of history in a digital age (Dougherty 2013). Already, powerful new ways of structuring the traditional monograph or essay have built on methodologies inspired by the new infrastructures of digital history, e.g. hyperlinking, keyword searching, or plain text (Gumbrecht 1998; Sand 2009; Tenen forthcoming). But when one moves from paper to the screen, there are many more possibilities to develop non-traditional historical narratives through interfaces between writers and readers (Cohen et al, 2008). The principle of 'gaming', for example, which allows a user to navigate through a historical problem or event according to their own thematic interests and/or chronologies, offers an entirely new way of narrating history: a forthcoming SNF-DFG project in the Department of History at UZH, led by Martin Dusinberre, will explore what these developments mean for our understanding of 'global' history in a digital age.

These transformations in research practices are also forcing scholars to develop a new paradigm of peer review, which within the discipline of history has traditionally been practiced in the blind review of written texts submitted for publication. The American Historical Association published Guidelines for the Professional Evaluation of Digital Scholarship by Historians in June 2015, after a three-year consultation period, but one key task for Digital History remains the implementation of commonly agreed 'good practices'.

3.3 Digital Technologies can transform the curricula of historical studies

At the most basic level, the proliferation of websites, learning guides and E-tools under the broad rubric of 'digital history' have transformed the teaching and learning landscape of history in higher education (e.g. Koller 2016). Students can now access textual and visual sources in online 'modules', curated by experts in the field. In terms of interactive E-learning, the Department of History at UZH has led the field with its Ad Fontes tool, which allows students to practice transcription and the reading of sources ranging from handwritten medieval texts to colonial photographs from Africa (<https://www.adfontes.uzh.ch/1000.php>).

One area which has received less attention, especially within the environment of history departments in the Germanic world, is the extent to which Digital History enables not only professional historians but also students to develop new ways of presenting their research. In

some North American universities, professors have experimented with having students present their work digitally instead of in the form of a seminar paper (e.g. the "Harvard Shorts" video assignments). The Foucault blog, hosted by the Department of History at UZH, already gives students a forum to publish their semester papers, and we are now beginning to find students who, wishing to develop the full interactive potential of digital technologies, want to create websites in lieu of the traditional Seminararbeit (e.g. MA student Joris Jehle's 'Cars and Emperors: Antiquity in a Fascist Frame', <http://www.arcgis.com/apps/MapJournal/index.html?appid=d4d900673e5a4946aa9d83f1bea8e1c1>). We see the classroom as one of the key future sites of Digital History and we hope to develop shared strategies for teaching—both in terms of offering students digital access and training in their academic work, and in terms of agreeing on assessment good practices.

3.4 Digital technologies are revolutionizing communications between historians and the public

The historian's changing methodological toolkit, combined with the potential for developing new forms of narrative, have brought the discipline of History into much more direct contact with the general public. Historians have developed new platforms by which to communicate their expertise, such as <http://geschichtedergegenwart.ch>, a new website launched by several professors from humanities departments within UZH. Some historians, such as the Department of History's Beat Näf, are able to reach out to a wider audience by presenting their research through the development of new interfaces (e.g. Näf's 'Kulturwege' app). New forums for discussion of work-in-progress facilitate direct interaction with the general public, thus helping historians cross boundaries not only between academic disciplines but also between 'academic' and 'non-academic' knowledge. Events sponsored by the UZH-ETH Zentrum Geschichte des Wissens are one such forum for ideas to be debated both virtually and in the flesh.

4 Conclusion

The Department of History's proposed Digital History Lab will tackle the crucial issue of how contemporary society should understand the historical emergence and evolution of digital societies. It will analyse a history of digital data, including its cultural and epistemological dimensions, while focusing also on societal issues (surveillance, privacy, cultural properties, public access, indigenous knowledge, citizen science, and the public understanding of academia) that speak directly to the interests of the UZH Digital Society Initiative. Drawing on existing digital history expertise in the Department of History, especially in Media History, History of Knowledge, E-learning, and digital dissemination, it will be a forum for sharing best practices between UZH historians, so as to offer practical and intellectual support to future projects. In these ways, the Digital History Lab will be a focus for research, teaching and engagement activities, offering scholars a space in which to reflect on and practice history in the digital age.

5 References

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