Getting to Work – Digital History Revisited

PIM HUIJNEN

Series Digital History

These concluding remarks are part of a series on digital history in the Netherlands and Belgium. Twelve years after the publication of the widely-read BMGN-issue on digital history in 2013 (https://bmgn-lchr.nl/issue/view/31), this series aims to provide a new state of the field. It comprises four serially published articles, which collectively emphasise the diversity of researchers, questions, methods and techniques that define digital history in 2025. The articles are published online in a new, HTML-based format that better showcases the methods and visualisations of the research published here.

Serie digitale geschiedenis

Deze slotreflectie is onderdeel van een serie over digitale geschiedenis in Nederland en België. Twaalf jaar na het veelgelezen BMGN-nummer over digitale geschiedenis uit 2013 (https://bmgn-lchr.nl/issue/view/31) maken we een nieuwe tussenstand op. De serie bestaat uit vier serieel gepubliceerde artikelen, die tezamen de veelzijdigheid accentueren van de onderzoekers, de vragen, de methoden en technieken die anno 2025 digitale geschiedenis definiëren. Deze artikelen worden online in een nieuw, op HTML gebaseerd format gepubliceerd, waardoor de methodologische toelichting en visualisaties van het hier gepubliceerde onderzoek beter tot hun recht komen.

Published by Royal Netherlands Historical Society | KNHG

DOI: 10.51769/bmgn-lchr.21151 | www.bmgn-lchr.nl | e-ISSN 2211-2898 | print ISSN 0165-0505

This concluding reflection closes the series dedicated to digital history published over the course of 2024. This article aims to draw connections between the four articles that featured in this series, in order to relate these to the current state of the field and to reflect on its developments since the 2013 publication of the first special issue dedicated to digital history in this journal.

De serie over digitale geschiedenis die doorheen 2024 werd gepubliceerd wordt met deze slotreflectie afgesloten. Deze bijdrage laat verbanden tussen de vier artikelen binnen de serie zien, koppelt deze aan een schets van de huidige stand van zaken in digitale geschiedenis en biedt zodoende een reflectie op de ontwikkelingen van dit veld sinds de publicatie van het eerste BMGN-themanummer over digitale geschiedenis in 2013.

Digital history in 2013 was often still about rhetoric – sometimes even about high-running emotions. That is the sensation one gets when rereading the first *BMGN – Low Countries Historical Review* special issue on digital history. It collected the sometimes cautionary, at other times jubilant reflections on what for most authors were their first experiences with digital history projects. The issue was preceded by guest editor Gerben Zaagsma's pointed state of the field 'On Digital History',[1] and followed by a forum of six contributions debating Rens Bod's thesis that the humanities inherently are and always have been a pattern-seeking field of study.

However, the sentiments that rose up from the issue were not restricted to only the authors that contributed to it, nor to scholars working in the Netherlands and Belgium. The early 2010s were the zenith of critical reflection on the digital humanities. The advancements in technologies, in the humanities and in data science that the umbrella of 'the digital humanities' aimed to capture were going on long enough to warrant a moment of reflection on the extent, the newness, and the unavoidability of the digital for the humanities. At the same time, these advancements were still so novel and exotic that they justified publications with the aim of offering guidance, or to simply paint panoramas of doing history 'in the digital age'.[2] It was the year Franco Moretti published his book *Distant*

1 Gerben Zaagsma, 'On Digital History', *BMGN – Low Countries Historical Review* (henceforth *BMGN – LCHR*) 128:4 (2013) 3-29. DOI: https://doi.org/10.18352/bmgn-lchr.9344.

2 See, for instance, Jack Dougherty and Kristen Nawrotzki (eds.), *Writing History in the Digital Age* (University of Michigan Press 2013). DOI: https://doi.org/10.3998/dh.12230987.0001.001; Matthew L. Jockers, *Macroanalysis: Digital Methods and Literary History* (University of Illinois Press 2013). DOI: https://doi.org/10.5406/illinois/9780252037528.001.0001; Patrick Manning, *Big Data in History* (Palgrave Macmillan 2013); Bob Nicholson, 'The Digital Turn', *Media History* 19:1 (2013) 59-73. DOI: https://doi.org/10.1080/13688804.2012.752963; Toni Weller, *History in the Digital Age* (Routledge 2013); Ian Gregory, 'Challenges and Opportunities for Digital History', *Frontiers in Digital Humanities* 1 (2014) 1. DOI: https://doi.org/10.3389/fdigh.2014.00001;

Reading, and a year before David Armitage and Jo Guldi's *History Manifesto* made strong waves.[3]

The 2013 *BMGN – LCHR* special issue was, in other words, perfectly well-timed. The reader statistics confirm this. Zaagsma's introductory article is one of the most-read articles according to the journal's website statistics. However, for a field – or methodological approach, or however one might define it – advancing as quickly as the digital humanities and digital history, ten years is a long time. That is why *BMGN – LCHR* has published a new series dedicated to digital history over the course of 2024, aiming to present what it currently means to do digital history in the Netherlands and Belgium. The series end with this first issue of 2025, which includes the series' last article, written by Ruben Ros, as well as this reflection. As the guest editor of this series, I aim to draw connections between the four articles to sketch the current state of the field and to make clear what has changed over the past decade.

Tone and content

Compared to 2013, emotions seem to have settled down by now. The field appears to have accepted 'the digital' as something that *is*. And fortunately so, because the rhetoric – both the optimistic and the pessimistic – harmed genuine and much-needed engagement with digital tools and techniques. It created unreasonable expectations and, often as a consequence, led to disappointment over underwhelming outcomes. By now, digital history has established itself as an institutionalised subfield of history, particularly in the US and Northern and Western Europe, with dedicated groups or centres, journals, conferences and educational programmes (Illustration 1). These are

Shawn Graham, Ian Milligan and Scott Weingart, *Exploring Big Historical Data: The Historian's Macroscope* (Imperial College Press 2014). DOI: https://doi.org/10.1142/p981; The same is true for the Digital Humanities in general. See, for instance: David M. Berry (ed.), *Understanding Digital Humanities* (Palgrave Macmillan 2012); Claire Warwick, Melissa M. Terras and Julianne Nyhan, *Digital Humanities in Practice* (Facet Publishing in association with UCL Centre for Digital Humanities 2012). DOI: https://doi.org/10.29085/9781856049054; Anne Burdick, *Digital Humanities* (MIT Press 2012); Matthew K. Gold, *Debates in the Digital Humanities* (University of Minnesota Press 2012); Alan Liu, 'The Meaning of the Digital Humanities', *PMLA/Publications of the Modern Language Association of America* 128:2 (2013) 409-423. DOI: https://doi.org/10.1632/pmla.2013.128.2.409; Melissa M. Terras, Julianne Nyhan and Edward Vanhoutte, *Defining Digital Humanities: A Reader* (Ashgate 2013); Katherine Bode and Paul Longley Arthur (eds.), *Advancing Digital Humanities: Research, Methods, Theories* (Palgrave Macmillan 2014).

3 Franco Moretti, *Distant Reading* (Verso 2013); Moretti coined the term eight years previously, in: Franco Moretti, *Graphs, Maps, Trees: Abstract Models for a Literary History* (Verso 2005); Jo Guldi and David Armitage, *The History Manifesto* (Cambridge University Press 2014). DOI: https://doi.org/10.1017/9781139923880.

Illustration 1. The installation of the new Philips computer P-1400 at the Dutch Ministry of Transport and Water Management, 27 January 1972. Photo taken by Hans Peters / Anefo. Source: National Archives, The Hague, CC0. http://hdl.handle.net/10648/abdf3f0a-d0b4-102d-bcf8-003048976d84.

all working towards shifting the frontiers of accepted practices of historical scholarship, as well as towards disseminating new practices to peers and students. The Netherlands are in many respects regarded as a frontrunner, not in the least thanks to their strong network of national digital infrastructures, collaborative initiatives, and the full embrace of digitisation and datafication by the national heritage sector – something that Belgium, unfortunately, is still lacking.[4]

At the same time, probably the most important gain of digital history is the observation that the historical field is starting to embrace digital methods and practices much more widely than only by those identifying as 'digital historians'. This series is itself proof of this, if only because it is published in a general, 'non-digital' historical journal. Historians, in the

4 See, for example: Netwerk Digitaal Erfgoed, https://netwerkdigitaalerfgoed.nl/; AI Coalitie 4 NL, aic4nl.nl; GPT-NL, https://gpt-nl.nl/; Common Lab Research Infrastructure for the Arts and Humanities (CLARIAH), https://www.clariah.nl/; Thematic Digital Competence Centres Social Sciences and Humanities (TDCC-SSH), https://tdcc.nl/about-tddc/ssh/; Platform Digitale Infrastructuur Social Sciences and Humanities (PDI-SSH), https://pdi-ssh.nl/nl/home/; Digital Infrastructure for Social Sciences and Humanities (SSHOC-NL), https://sshoc.nl/. All accessed 11 February 2025.

Netherlands and Belgium and elsewhere, are incorporating digital tools and techniques to contribute in new and meaningful ways to prevalent scholarship. These do not necessarily have to be based on cutting-edge natural language processing or machine learning, because the historians using them are less interested in testing new techniques, as they are in answering relevant questions. Even computationally trivial processes such as counting frequencies over time can lead to meaningful new insights.[5]

While it was Zaagsma's ambition to not only theorise but to also focus on 'the changing *practice* of doing history in the digital age', his article demonstrates that writing about digital history in 2013 still necessarily meant engaging with the rhetoric of big data. It was the time when Victor Mayer-Schönberger and Kenneth Cukier hailed the accumulation of massive amounts of data that would reveal patterns and correlations bearing the promise of 'novel and invaluable insights', giving up our 'obsession for causality', loosening up 'our desire for exactitude', and letting the data 'speak for itself'.[6] This was such a provocative departure from what motivates historical research that it could not be left unanswered. Ten years of accumulated digital historical scholarship later, it is presently a great deal easier to paint a clear picture of the practice of digital history than it was in 2013. That is what this series aims to do.

The series on digital history

The collection brings together four contributions that illustrate the wide spectrum of current scholarship that makes up digital history in the Netherlands and Belgium. The first contribution is Marly Terwisscha van Scheltinga, Sara Budts and Jeroen Puttevils' article '(Fe)male Voices on Stage: Finding Patterns in Lottery Rhymes of the Late Medieval and Early Modern Low Countries with and without AI', published in the first issue of 2024.[7] It

5 Jo Guldi, 'The History of Walking and the Digital Turn: Stride and Lounge in London, 1808-1851', *The Journal of Modern History* 84:1 (2012) 116-144. DOI: https://doi.org/10.1086/663350; Dan Jurafsky et al., 'Linguistic Markers of Status in Food Culture: Bourdieu's Distinction in a Menu Corpus', *Journal of Cultural Analytics* 1:1 (2016). DOI: https://doi.org/10.22148/16.007; Pim Huijnen, 'Everyday memory: A computational analysis of changing relations between past and present in Dutch newspapers in the 20th century', *Digital Scholarship in the Humanities* 40: Supplement_1 (2025) i27-i38. DOI: https://doi.org/10.1093/llc/fqad099.

6 Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think* (Houghton Mifflin Harcourt 2013) 14.

7 Marly Terwisscha van Scheltinga, Sara Budts and Jeroen Puttevils, '(Fe)male Voices on Stage: Finding Patterns in Lottery Rhymes of the Late Medieval and Early Modern Low Countries with and without AI', *BMGN – LCHR* 139:1 (2024) 4-28. DOI: 10.51769/bmgn-lchr.13872.

shows what historians can do with 11,000 lottery rhymes from the fifteenth and sixteenth centuries, if they are turned into machine-readable text and analysed with the help of state-of-the-art language models, particularly as an entry-point into the public life of early modern women. The second article, published in the second issue of 2024, is Weixuan Li and Chiara Piccoli's 'Placing Value in Domestic Interiors: 3D spatial mapping of Pieter de Graeff and Jacoba Bicker's Home Art Collection'.[8] It demonstrates how 3D reconstruction can bring domestic interiors to life. Li and Piccoli's case grants a spatial peek inside the house of a seventeenth-century Amsterdam upper-class family to study the manner in which they valued family portraits and other works of art.

The third contribution, although still grounded in early modern historical scholarship, turns the attention to an entirely different context. Fieke Smitskamp's 'From Ah! to Little Z: Clustering Spelled Language Sounds in Early Modern Dutch Theatre Plays (1570-1800)', published in the fourth issue of 2024, takes the spoken word of theater as its source.[9] A database of spelled language sounds enables Smitskamp to examine notable developments in theatrical practices. The fourth and final article in this series, 'Plastic Politics: Revisiting Politicisation and Depoliticisation in Dutch Postwar History', by Ruben Ros, is published alongside my reflection. Ros's contribution turns the focus towards the second half of the twentieth century. It takes the digitised Dutch parliamentary records as its source base and uses advanced modeling techniques to examine claims of increasing politisation and depoliticisation in Dutch politics.

Obviously, a collection of four can never provide a comprehensive overview of the state of the field. Nevertheless, these articles are illustrative in more than one sense. First, they demonstrate that digital history is not only relevant for those working with mass-digitised material from the nineteenth and, most prominently, twentieth and twenty-first century. This series shows how the wide variety of available digital methods has spurred the creative use of older historical material. This is not only true for the premodern era that is well-represented in this collection. Scholars in medieval and ancient history profit just as much from advancements in technologies ranging from handwritten text recognition (HTR) and geographical information systems (GIS) to linked open data (LOD).[10]

8 Weixuan Li and Chiara Piccoli, 'Placing Value in Domestic Interiors: 3D Spatial Mapping of Pieter de Graeff and Jacoba Bicker's Home Art Collection', *BMGN – LCHR* 139:2 (2024) 4-37. DOI: 10.51769/bmgn-lchr.13880.

9 Fieke Smitskamp, 'From Ah! to Little Z: Clustering Spelled Language Sounds in Early Modern Dutch Theatre Plays (1570-1800)', *BMGN – LCHR* 139:4 (2024) 7-31. DOI: 10.51769/bmgn-lchr.13868.

10 See, for example: Ariane Pinche, Cremmalab: Constitution de corpus en ancient français pour l'HTR, https://cremmalab.hypotheses.org/, accessed 11 February 2025; Walter Scheidel and Elijah Meaks, Orbis: The Stanford Geospatial

Second, the four articles are representative of the range of data formats that researchers are presently working with. Textual sources predominate digital history as they do historical scholarship as a whole, but the articles based on auditory and spatial information give an impression of other data formats that digital methods allow to analyse. Again, in terms of providing a more exhaustive overview, the series could have been extended easily. The digital historical analysis of visual material, for example, has been boosted by the rise of digital (audio)visual archives and the advancement of computer vision.[11] The analysis of structured data in economic and social history has similarly profited from the rapid advancements in data science as a whole.

Third and lastly, the series has aimed to demonstrate that digital historical scholarship can be found throughout Dutch and Belgian universities, by scholars of different genders and in various phases of their careers. This said, the fact that every publication is authored by at least one PhD or postdoc researcher, is testament to the changes in the sets of skills and perspectives that historians have.

These three observations provide the most important external criteria of how the four contributions to this series are representative of the wider field.[12] I now turn to what they are actually about – how they apply digital methods to make a historical argument. This is, after all, what they have in common: they are primarily concerned with the historiography and the relevant questions of their respective fields, not with digital humanities per se. They bring to practice the observation historian Simone Lässig made some years ago:

> In using the term digital history, then, historians aim to carve out a field that reflects their interest in accessing the digital space from the questions and issues raised in their field, that takes their specific types of primary sources and epistemology into account, and that uses digital technology to answer their research questions without becoming an end in itself.[13]

Network Model of the Roman World, https://orbis.stanford.edu/, accessed 11 February 2025; Torsten Hiltmann and Thomas Riechert, 'Digital Heraldry – The State of the Art and New Approaches Based on Semantic Web Technologies', in: Christelle Balouzat-Loubet (ed.), *Digitizing Medieval Sources – L'édition en ligne de documents d'archives médiévaux: Challenges and Methodologies – Enjeux, méthodologie et défis* (Brepols 2020) 102-125. DOI: https://doi.org/10.1484/M.ARTEM-EB.5.117334.

11 Thomas Smits and Melvin Wevers, 'A Multimodal Turn in Digital Humanities: Using Contrastive Machine Learning Models to Explore, Enrich, and Analyze Digital Visual Historical Collections', *Digital Scholarship in the Humanities* 38:3 (2023) 1267-1280. DOI: https://doi.org/10.1093/llc/fqad008.

12 For an overview of widely used techniques in digital history, see: Annemieke C. Romein et al., 'State of the Field: Digital History', *History* 105:365 (2020) 291-312. DOI: https://doi.org/10.1111/1468-229X.12969.

13 Simone Lässig, 'Digital History: Challenges and Opportunities for the Profession', *Geschichte und Gesellschaft* 47:1 (2021) 10. DOI: https://doi.org/10.13109/gege.2021.47.1.5.

Illustration 2. The inspection of data machines for the registration of personal data in the Netherlands, ca. 1980. Photographer unknown. ©NFP Photography BV c/o Pictoright Amsterdam 2025. http://hdl.handle.net/10648/d64e41be-7243-297d-26a9-2d7f7aedb2c3.

What follows are some reflections on how they do this. I will highlight three elements that I consider typical for the current state of the field of digital history in the Netherlands and Belgium. These concern, first, the topics and dimensions of historical research, second, the forms of presentation and dissemination and, third, knowledge production.

New dimensions

To start with, working with digital data and methods changes the historian's craft considerably. It has a substantial impact on research workflows, probably most importantly because it demands an intermediate step of data preparation. Datafication introduces the wider field of history to norms and practices of dealing with questions of representativeness, coherence and absent or ambiguous information that were hitherto the exclusive domain of socio-economic historians (Illustration 2). Specific for digital analysis is that the data, in addition, must become machine-readable, cleaned and structured. The cliché goes that this preprocessing amounts to 80 percent of the time and energy of any research project, compared to 20 percent for the actual research.

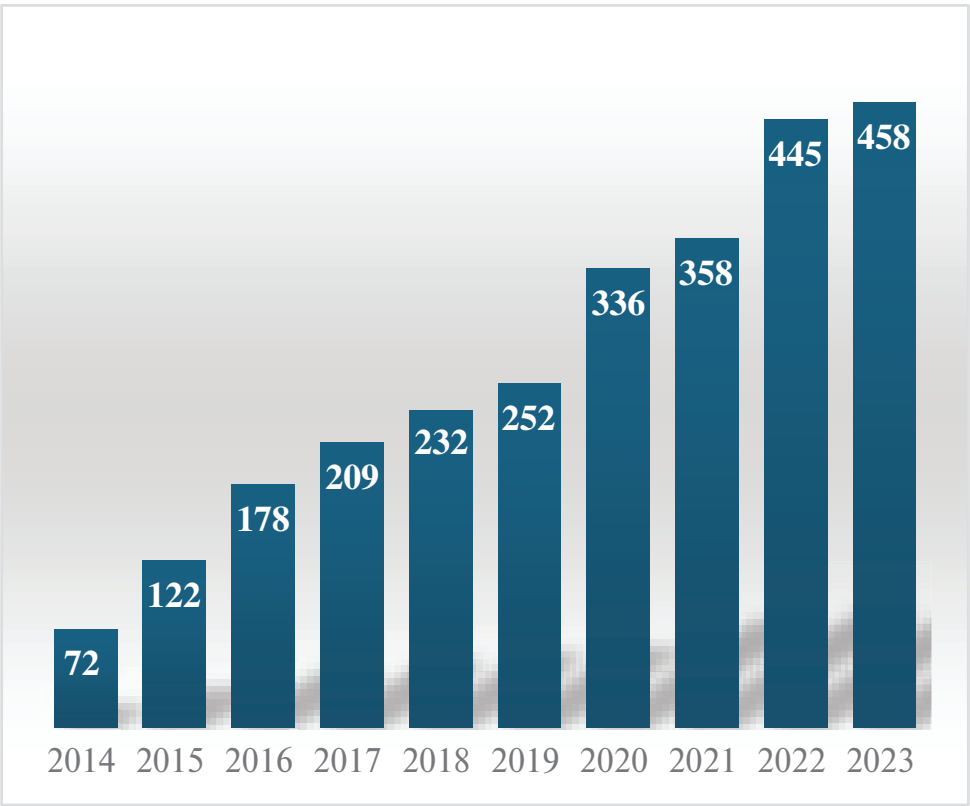

Figure 1. The number of publications that contain the word 'Delpher' as found in Google Scholar.

The sources and methods sections of the articles in this series provide some clues as to what this work amounts to. Terwisscha van Scheltinga et al. describe the (still necessary) manual transcription and labelling for gender of 11,000 lottery rhymes, Li and Piccoli digitised floorplans and combined these with information from other sources for their 3D reconstruction, Smitskamp extracted spelled sounds from the digitised and machine-readable words of 167 early modern plays. What these widely differing approaches have in common is that their innovation does not so much lie in the discovery of new sources, but in turning these sources into datasets, often a process of painstaking labour.

This way of working has some clear consequences. On the one hand, using digital tools and techniques for preprocessing and analysis requires skills, but also digital infrastructure of, at the very least, sufficient computing power. Prerequisites like these are the reason why digital history has almost by definition become a collaborative and interdisciplinary endeavour. This is reflected in this series by the fact that half of the articles are co-authored. Smitskamp acknowledges the assistance she received in developing her digital method. Only Ros has done his research singlehandedly. It is relatively rare for historians to have the programming and statistical skills that Ros displays, but, as already noted above, the digital skillset of historians does keep on growing. The wide use of tools such as Transkribus, for handwritten text recognition, for example, illustrates this.[14]

On the other hand, the time and energy that is needed for data preparation has created a pull from well-curated, freely available datasets. The Netherlands are in a particularly comfortable position when it comes to historical textual data. Delpher, the National Library's platform for historical newspapers, magazines and books that started as a publicly accessible repository in 2013, has witnessed a highly increasing interest from scholars ever since.[15] Figure 1 illustrates this. While the word 'Delpher' yields very few results for the years up to 2013, the graph shows the rapid rise of publications that in some way refer to the platform. The advantage of this interest in historical media is that more and more scholars discover the undisputable richness of the corpus, as some of the Delpher-based contributions in this journal illustrate.[16] Even though the downside is that

14 Transkribus, https://transkribus.org/.

15 Delpher, https://www.delpher.nl/.

16 David Onnekink and Suzanne Ros, 'The Greening of Dutch Protestant Christianity (1960-2020)', *BMGN – LCHR* 139:2 (2024) 66-95. DOI: https://doi.org/10.51769/bmgn-lchr.13865; Huub Wijfjes, Gerrit Voerman and Patrick Bos, 'Meten van verzuilde politiek in media. Een digitale benadering van katholieke en sociaaldemocratische dagbladen, 1918-1967', *BMGN – LCHR* 136:3 (2021) 61-91. DOI: https://doi.org/10.51769/bmgn-lchr.6916; Joris van Eijnatten, 'Something about the Weather: Using Digital Methods to Mine Geographical Conceptions of Europe in Twentieth-Century Dutch Newspapers', *BMGN – LCHR* 134:1 (2019) 28-61. DOI: https://doi.org/10.18352/bmgn-lchr.10655. See also: Estelle Bunout, Maud Ehrmann and Frédéric Clavert

something is lost when scholarship increasingly coagulates around a discrete number of datasets that happen to be available, turning towards well-curated, more or less comprehensive and freely available corpora takes away some of the risks involved in spending large amounts of time and energy in data preparation.

It can be a risky and frustrating enterprise to start from scratch. The history of digital history is littered with examples of research with interesting premises that did not come to fulfillment, sometimes because the laboriousness of data gathering and preparation left hardly any time to actually do anything with it, sometimes because the dataset lacked the representiveness to make hard claims, sometimes because the information that was expected to be gained from the data was simply not represented in the statistical results. The conference papers and article submissions (rather than publications) that form the usual output of this type of research show the need for some tangible evidence of the labour that was needed. The presented results are often of the proof-of-concept or stating-the-obvious sort, and part of the reason for the 'widespread sense that digital history has over-promised and under-delivered'.[17]

However, this is not untypical for the quantitative sciences, where 'success' is often defined much more narrowly than in the humanities. It has its counterpart in the disapproval of null results in the social, physical and medical sciences, leading to questionable research practices such as massaging the data long enough to find some statistically significant results (p-hacking). Persisting academic structures prescribe, after all, that the time invested in research has only been worthwhile if it has resulted in 'real' results – while embracing the chance of 'failure' is probably the more productive solution.[18]

A less risky but by no means less fruitful or interesting approach to digital history leans closer to the open questions that branches of conventional historical scholarship are used to ask – questions that seek to broaden our understanding of the past. The articles by Li and Piccoli and by Smitskamp in this series are successful examples of this. Similar to historians who discovered the value for historical research of diaries, jokes, interviews, or medical dossiers before them, they have used new information to highlight dimensions of the past that had hitherto been overlooked – in Li and Piccoli's case the physical interior space of a

(eds.), *Digitised Newspapers – A New Eldorado for Historians? Reflections on Tools, Methods and Epistemology* (De Gruyter 2022). DOI: https://doi.org/10.1515/9783110729214.

17 Arguing with Digital History working group, 'Digital History and Argument', white paper, Roy Rosenzweig Center for History and New Media (13 November 2017) 2, https://rrchnm.org/argument-white-paper/.

18 Brian Croxall and Quin Warnick, 'Failure', *Digital Pedagogy in the Humanities*, https://digitalpedagogy.hcommons.org/keyword/Failure, accessed 11 February 2025.

seventeenth-century canal house, in Smitskamp's case the sound of the pronunciation of early modern words. For the authors of these articles, opening up these new dimensions of the past is a means to an end. It enables them to answer new questions. However, presenting the availability of these dimensions for historical scrutiny is valuable in itself. It might inspire others to do something similar, or might be of direct benefit for other historical inquiries.

Digital dissemination

The contributions of Li and Piccoli and Smitskamp perhaps most acutely illustrate the second observation I aim to make: in digital history, argument and form are interwoven. The 3D spaces that Li and Piccoli created are not merely illustrations that strengthen their narrative, they are models and, therefore, argumentative constructions in themselves. This makes them no less than the written narrative an intricate part of the authors' argument, just as Smitskamp's sound-structures do, or the plots included in the articles of Terwisscha van Scheltinga et al. and Ros. This raises the question whether the accepted norms and structures for scholarly output in our field are still up to date. Li and Piccoli's 3D model is, after all, impossible to translate to a paper format – even if 'paper' is taken broadly as the ubiquitous PDF format that most publications are now distributed in.

As a consequence, this series has also turned into an experiment in publishing digital historical scholarship. *BMGN – LCHR*'s publishing platform Openjournals in collaboration with the journal's editorial office have developed an infrastructure that allows for the integration of various data types, from audio and video to interactive graphics or programming code, into the textual format of a historical paper. Particularly the larger publishers are currently offering a similar flexibility in what can be presented within history publications, although this is still rarely the case for the interactive elements that this series holds. By taking this effort, *BMGN – LCHR* acknowledges that the practice of doing (digital) research is intricately tied to modes of dissemination. After all, it will make it more worthwhile to explore the use of digital tools and techniques in history if publication infrastructures are able to cope with them.

This argument holds for the dimensions that digital techniques might unlock for historical investigation, but also for the methods that historians use. Writing an academic article means, almost by definition, to walk a tightrope between full methodological transparency and committing to word limits and readability. While markers such as 'archival research' may suffice for the experienced reader of historical scholarship to imagine what that might have entailed, digital methods require that the many choices in both the above-mentioned preprocessing and the analysis are made much more explicit. They are not neutral interventions, after all, and need to be justified.

And they *can* be justified, once historians stop regarding the manner in which they disseminate their scholarship, be it articles or books, as things in paper form. Digital publications do not have the same constraints as paper. Methodological justifications, datasets, or additional information can easily become part of any publication in the form of separate documents or pages that accompany a publication on the publisher's website, or of repositories on dedicated platforms such as GitHub or Zenodo. This point, for some reason, catches on rather slowly, although notable exceptions do exist. The *Journal of Digital History*, which the University of Luxembourg's Centre for Contemporary and Digital History founded in 2021 in cooperation with publisher De Gruyter, has introduced a publication form that consists of separate layers for the narrative, the data and the method.[19] The publishing format of this series in *BMGN – LCHR* has taken inspiration from this model. Clickable text foregrounds explanations on data or methods in frames separate from the narrative, thus enhancing transparency and reproducibility of the analytical steps without rendering the main text unreadable.

Although the series departs from a strict hierarchy between main text and supplementary information, the idea that digital publication forms make traditional limits redundant does have its effect on historical scholarship. It changes the formal notion of what counts as a publication, but it also impacts existing ideas of academic storytelling. The mentioned solutions break down the strong linearity of historical arguments. This is, perhaps, even more true for interactive visualisations that online publishing allows for. The three-dimensional scatter plots in Terwisscha van Scheltinga, Budts and Puttevils's article that model the linguistic similarity between all lottery rhymes of a given year and city allow the reader to pause and explore the data for themselves. This is more than a fancy illustration. It helps readers to understand the authors' methods, to check their analyses and to think along in interpreting the quantitative output. In other words, interactive formats such as these plots or Li and Piccoli's 3D model of a domestic interior,[20] which has a similar function, have the potential to actually change the relation between author and readership.

To be clear, this observation itself is far from new. The reformative power of digital publishing has been argued since the early days of the internet, in times when the prefix 'hyper' made everything that happened online sound futuristic.[21] It is, nonetheless, typical that the potential of digital dissemination is still mainly just that.

19 Journal of Digital History, https://journalofdigitalhistory.org/.

20 'Virtual Interiors as Interfaces for Big Historical Data, Experimental prototype, https://3d-demo.virtualinteriorsproject.nl/index.html?app=pdg-entrance-hall&fps=30.

21 See, for example, Todd Samuel Presner, David Shepard and Yoh Kawano, *Hypercities: Thick Mapping in the Digital Humanities* (Harvard University Press 2014).

Illustration 3. One of the many memes ironising the sense of competition between conventional and digital scholarship in the humanities that are circulating online since the 2010s. For more, see for example the UCL's Digital Humanities and Design blog: https://blogs.ucl.ac.uk/definingdh/digital-humanities-and-design/memes/.

Digital knowledge production

The third and final point I want to address about the state of the field of digital history, after changing workflows and modes of dissemination, regards epistemology. One could argue that the impact of digitisation and datafication on knowledge production in history is of a different nature than sceptics feared – and some enthusiasts hoped – ten years ago (Illustration 3). The trend towards working with digitised or born-digital data, as well as the expansion of the historian's methodological toolbox with new analytical computational tools, have not overthrown decades-old traditions of doing history.

And for the better. The air of computational magic that surrounded 'big data' kept the promise of revolutionary research alive long enough. Although it is currently at risk of returning in the guise of artificial intelligence (AI), it was seemingly ebbing away – something Jane Winters already noticed in the late

2010s, when she observed room 'for a range of different approaches rather than a single all-encompassing quantitative solution'.[22]

A confrontation with the rhetoric of big data has by now become redundant. The same is, fortunately, true for the cliché of the interplay between distant and close reading, a mantra that digital humanities papers have invoked so often that it has lost all meaning. Even if arguments are partly or wholly based on quantification, for research questions that aim to add to current debates in specific fields distant reading is a rather meaningless concept because it only adds unhelpful mystique to what digital history means.

If we go beyond the rhetoric and look at the practice of digital historical research, we can see all the ways in which digital output can be integrated in accepted historical practices. The authors in this series offer good examples of this more down-to-earth attitude. They use digital methods not because of some overhyped promise, nor as technologies in search of a use. They adopt their approaches almost self-evidently because these enable them to do something relevant and interesting, and they integrate them in relevant historiographical debates. The integration of digital methods in this way is perhaps best described as a form of 'digital hermeneutics' that does not have the ambition (per se) to overthrow accepted knowledge by doing things radically different, but rather to combine conventional and digital methods to study the past based on expertise and with an attitude that is both critical and creative.[23]

To be fair, this is not at all at odds with the 'transformative power' of 'the digital' that Joris van Eijnatten et al. hailed in that first special issue on Digital History. The authors stressed the strength of existing scholarship in the field and doubted that 'conclusions obtained through digital methodologies will differ substantially from those acquired by traditional means'.[24] Given that much of digital history is based on primary source material that historians have known and worked with for decades, this makes perfect sense. The transformation that Van Eijnatten and colleagues envisaged had most to do with new possibilities to detect longer-term discursive trends and of new standards for methodological transparency – which is quite in line with the argument above.

22 Jane Winters, 'Digital History', in: Marek Tamm and Peter Burke (eds.), *Debating New Approaches to History* (Bloomsbury Academic 2018) 287. DOI: https://doi.org/10.5040/9781474281959.0015.

23 Silke Schwandt, 'Opening the Black Box of Interpretation: Digital History Practices as Models of Knowledge', *History and Theory* 61:4 (2022) 77-85. DOI: https://doi.org/10.1111/hith.12281; Inge van de Ven and Lucie Chateau, *Digital Culture and the Hermeneutic Tradition: Suspicion, Trust, and Dialogue* (Routledge 2024). DOI: https://doi.org/10.4324/9781003372790; Andreas Fickers and Juliane Tatarinov (eds.), *Digital History and Hermeneutics: Between Theory and Practice* (De Gruyter 2022). DOI: https://doi.org/10.1515/9783110723991.

24 Joris van Eijnatten, Toine Pieters and Jaap Verheul, 'Big Data for Global History: The Transformative Promise of Digital Humanities', *BMGN – LCHR* 128:4 (2013) 75. DOI: https://doi.org/10.18352/bmgn-lchr.9350.

Outlook: The future of 'digital history'

A single statement in Zaagsma's 2013 introductory article can be seen as the starting point of the current special collection: 'that within a decade or so there will be no more talk of "digital history" as all history is somehow "digital"'.[25] In the sense that the reality of digital history in 2024 is broader than what is done under that label, as I have argued above, this statement has become reality – at least in spirit. The lasting impact of data and digital tools and methods on workflows, publication conventions and knowledge production in the field of history is not only felt by historians working under the explicit header of digital history. They also know better how to deal with it. The digital naïveté of many historians that Zaagsma and others bemoaned ten years ago has improved to a considerable extent.[26]

The present collection is testament of a field moving in this direction. This does not mean, of course, that integrating digital methods in historical research is self-evident, or even realistic, for every researcher. It is a fair question to ask whether the skills, equipment, infrastructure, and, often, funding needed for using digital methods on digital data does not create a 'digital divide'. This topic is a returning point of discussion on a global scale, with the argument that the Global South runs the risk of lagging behind due to lesser access to digital data and funding to support the advancement of digital approaches.[27]

A similar argument can also be made on the individual scale: It takes investments to get acquainted with methods and techniques that are not commonly part of the training of historians, and researchers do not have equal resources to make those investments. This is undoubtedly true, but for this reason the number of initiatives – from free tutorials to off-the-shelf tools – that aim to keep these investments at a minimum is growing, too.[28] At universities, moreover, libraries, IT departments and dedicated centres have turned into the most prominent places of expertise in Digital Humanities research, frequently with an admirable dedication to helping out researchers. Within academia, lacking digital skills, therefore, often comes down to not knowing who to reach out to for support. On the longer term, this problem

25 Zaagsma, 'On Digital History', 16.

26 See, for instance, Tim Hitchcock, 'Confronting the Digital: Or How Academic History Writing Lost the Plot', *Cultural and Social History* 10:1 (2013) 9-23. DOI: https://doi.org/10.2752/147800413X13515292098070.

27 'Access' was, for example, the overarching theme of the global Alliance of Digital Humanities Organizations conference of 2017 in Montréal: https://dh2017.adho.org/.

28 For tutorials, see the excellent Programming Historian platform: https://programminghistorian.org. Some widely used tools are Voyant Tools, hosted at the University of Alberta (https://voyant-tools.org) and the University of Luxembourg-based Impresso tool (https://impresso-project.ch).

proves the need to rethink the training that historians in the digital age really need.

If anything, the above shows that digital history as such, in Belgium and the Netherlands and abroad, has a role to play in historical scholarship – one that is perhaps more important than ever. Historians are confronted with a steady rise in the availability of (historical) data, a serious focus on digital literacy in academic education, and, of course, the unavoidability of (generative) AI. Given the tempo of current advancements in AI and the impact it is expected to have on academic research no less than on society at large, the field of history needs a place for experimentation with and reflection – both methodological and epistemological – on new technologies. Fortunately, historians are catching on to these developments: the contributions of Terwisscha van Scheltinga et al. and Ros to this series provide some exciting glimpses of how AI-based language models can be incorporated in historical research. The opportunities and limitations of deep learning, large language models and generative AI for the study of history is something for the next *BMGN – LCHR* special issue to reflect on – in ten years or so.

Pim Huijnen is assistant professor at the Department of History and Art History at Utrecht University. His research focuses on the use of digital text analysis to study conceptual history and the circulation of knowledge between science, politics and popular culture. He is the principal investigator of a research project funded by the NL eScience Centre (2022-2025) aimed at exploring the use of the latest generation of language models to study conceptual change over time. Among his recent publications are 'Something Happened to the Future: Reconstructing Temporalities in Dutch Parliamentary Debate, 1814-2018', *Contributions to the History of Concepts* 16:2 (2021) 52-82. DOI: 10.3167/choc.2021.160204 (together with Joris van Eijnatten; the article won the the 2022 Richard Deswarte Digital History Prize) and *On the Use of Replications in History: A White Paper* (Utrecht 2022). DOI: https://doi.org/10.5281/zenodo.7037401 (together with Pieter Huistra). Huijnen is a member of the editorial board of *BMGN – LCHR*.
E-mail: p.huijnen@uu.nl.