Exploring Jewish History in the Digital Age

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Introduction

> *"Many changes have taken place in the last fifty years in methodology of research in the field of Jewish Studies, but the mechanical tools with which the researcher works have remained almost unchanged in the last five hundred years."*[1]

A little over 50 years ago, during the Fifth World Congress of Jewish Studies in 1969, Henry Ekstein outlined a vision for a database that, in his view, would solve many of the information storage and retrieval challenges facing the field of Jewish Studies. Ekstein argued that, given the state of technology, it was possible to "establish a large scale data bank which would include information in the field of Jewish Studies, and to connect this bank by means of a telecommunication network to the most important research centers in this field all over the world."[2] Ekstein's vision is reminiscent of early information organisation systems, as developed and realised by the Belgian lawyer and proto information scientist Paul Otlet and his companion Henri Lafontaine.[3] It also echoes developments in data communications networks that got underway in the 1960s and would eventually evolve into the Internet in the 1980s and World Wide Web in the 1990s. Ekstein, in sum, was effectively outlining what an online library for Jewish Studies could look like in an age when digital computing began to replace its analog siblings.

Ekstein's remarks raise a number of broader questions, however. To begin with, they hint at the *longue durée* of the encounter between technology and the humanities, in techno-material terms as well as in thinking through its broader consequences for humanities research practices. Secondly, they highlight challenges in the realm of information management that were by no means exclusive to the field of Jewish Studies alone and had been discussed by early information scientists for some decades already. And finally, Ekstein's remarks notwithstanding, the mechanical tools he spoke of had in fact undergone signifcant change since the late 19th century and Jewish Studies scholars had keenly taken advantage of the possibilities they afforded ever since then.

Indeed, historians such as Samuel Oppenheim had been using the photostat since the 1920s to gather dispersed materials about their research topics, social scientists had been using punched card technology to study Jewish demographic developments since the late 1930s, microfilming Jewish archives got underway in the late 1940s, and linguists had been using the aforementioned punched

[1] Henry C. Ekstein, Henry, 'How to Increase Effectiveness of Research in Jewish Studies', *Proceedings of the World Congress of Jewish Studies* (1969) 3-7, 3.
[2] Ibidem, 5.
[3] W. Boyd Rayward ed., *International Organisation and Dissemination of Knowledge: Selected Essays of Paul Otlet* (Amsterdam: Elsevier, 1990).

card technology to create concordances, and process linguistic data, since the late 1950s. Ekstein's comments, then, revealed a lack of historical awareness that could be encountered until quite recently in much digital humanities discourse in which the focus is usually on the present and the future, and the question how the past shaped these is often ignored.

Given the broader historical context I have just tried to sketch, the bigger question I wish to address today is what the encounter between new technologies and Jewish Studies looked like in roughly the past hundred years, specifically in Jewish history, what it looks like today in the age of digital humanities and digital history and, with that broader context in mind, reflect on where we might be headed.[4]

Before asking how knowledge production in Jewish Studies, especially Jewish history, has been affected by the emergence of new technologies it is necessary to briefly address two questions. First, the question of why considering the genealogy of the digital turn in the humanities is so important; and, secondly, the question of why humanists should reflect upon the role and impact of technology in and on their work. Both questions are of a fundamental nature in that they ask how research practices in the humanities have historically evolved and, as a consequence, shaped its methodological and epistemological foundations.

The History and Impact of Technology in the Humanities

As to **the genealogy of the digital turn in the humanities**: the fact that knowledge production has always been affected by new and emerging technologies is often forgotten. If we look at what we now call 'digital history', however, key epistemological and methodological questions were already debated decades ago by earlier generations of computing historians (both analog and digital). As these earlier discussions are overlooked, though, it seems as if every new generation of historians rediscovers the promise of 'digital history', with all its attending hopes, visions and ambitions for reinventing and reshaping historical research. There seems to be a lack of transmission of accumulated knowledge from the past, yet many of the fundamental questions that underpin current digital practices in historical research have remained the same, even if many applications of computing by today's digital historians might seem, and indeed are, radically different.

This rhetoric of radical newness is not unique to digital history but, as Nyhan, Flinn and Welsh have argued, a general feature of much discourse about digital humanities in the past twenty years. They warn that without an understanding of the history of computing in the humanities, "we are condemned to repeat the revolutionary trope ad infinitum" and succumb to a superficial and "evolutionary model of progress" in which that complex history is effectively erased.[5] To ground our current 'digital' practices and learn from past experiences and expertise, we need to contextualise and qualify what is new and what is not. In other words, we need an answer to the question: what were, and are, the continuities and ruptures in the use and uptake of new technologies in historical research, and in the debates that accompanied them?

Malte Rehbein has argued that a key issue for digital history today is not about the transfer of

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[4] What I will not address here is how technology, as a key aspect of modernity, has affected Jewish history itself. This is a different topic where the well-known debate about the role of IBM's technology in the Holocaust, to name a key example, immediately comes to mind. Today, however, it has acquired a new urgency as we witness the rapid spread and increasing normalisation of anti-Semitic conspiracy theories on social media, especially in the wake of the current covid pandemic.

[5] Julianne Nyhan, Andrew Flinn, and Anne Welsh, 'Oral History and the Hidden Histories Project: Towards Histories of Computing in the Humanities', *Literary and Linguistic Computing Lit Linguist Computing* 30, no. 1 (2015) doi:10.1093/llc/fqt044.

"new, initially complementary methods" but revolves around their transformation so as to "replace existing methods and [establish] new ways of thinking".[6] This transition from *Transferwissenschaft* to *Transformationswissenschaft*, however, seems doomed to fail without knowledge of the very debates that accompanied attempts to introduce new technologies in historical research and the concomitant development of new methods and practices.

This brings us to the second question: why would humanities scholars reflect upon **the role and impact of technology** in and on their work? The answer to that question, on its most basic level, is that technology shapes, and has always shaped, scholarly research in manifold albeit rather uneven ways: technology can enable new research avenues on the one hand, but it in the process it might also introduce new 'constraints'. To give a simple example: the photostat and microfilm enabled researchers to consult materials whose originals were stored far away. At the same time, the loss of colour, smell and the very different materiality of the photographic representation, prevented them from seeing certain properties which only the original possessed. And that absence subsequently affected their interpretive and hermeneutical work and thus research outcomes.

As might be clear from this simple example, technology has an impact that directly affects knowledge production and goes beyond important but intellectually less consequential matters of saving time and effort, though the latter might be re-invested in the more intellectual aspects of the research at hand. Technology shapes, frames and alters the various stages of the research process and, as important, can determine what can be researched and which questions can be asked and answered. Indeed, the very rationale of attending to technology's role lies in its potential to expand the possibilities and conditions for knowledge production. As Emmanuel LeRoy Ladurie already noted in 1973: "'In history, as elsewhere, what counts is not the machine, but the problem. The machine is only interesting insofar as it allows to tackle new questions that are original because of their methods, content and especially scale".

Similarly, the well-known digital humanist *avant la lettre* Roberto Busa remarked in 1980 that "the use of computers in the humanities has as its principal aim the enhancement of the quality, depth and extension of research and not merely the lessening of human effort and time". More recently, Willard McCarty has advocated for understanding the computer as "a machine to think with", borrowing a phrase of literary critic Ivor Richards who used it to describe the codex book in 1925. In this understanding the machine changes our thinking and thereby widens our cognitive horizons. Our skillful use is what activates this potential, which is only limited by our imagination, a faculty that, incidently, is much admired by most humanists, even those of the machine-fearing kind.

Information scientists have been much more aware of how technology's impact transcends technical modalities than many humanists. Michael Buckland, for instance, has talked about "the material and social aspects of becoming informed".[7] Technology is transformational by nature; media are socially embedded and constituted and information shapes and is shaped by the social constellations in which it moves. All this shapes knowledge production. As the literary scholar Jerome McGann said when discussing the digital archive: "Digitizing the archive is not about replacing it. It's about making it usable for the present and the future. To do that we have to understand, as best we can, how it functioned—how it made meanings—in the past." Understanding how today's *digital* archives make and enable meanings is of course an essential task for any contemporary historian.

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[6] Malte Rehbein, "'L'historien de demain sera programmeur ou il ne sera pas." (Digitale) Geschichtswissenschaften heute und morgen', *Digital Classics Online* 4/1 (2018) 23-43.

[7] Michael K. Buckland, 'Paper Knowledge: Toward a Media History of Documents', *Journal of the Association for Information Science and Technology* 66/5 (2015) 1088–1089. doi:10.1002/asi.23492.

New technologies in Jewish Studies

With this in mind let's now have a look at the emergence and uptake of new technologies in Jewish Studies. To do so we should go back to the early 20th century when photography began to be used for educational, reproduction, and research purposes, and archives began to offer photographic services on their premises.[8] Until WWII, the use of such aids mostly concerned technologies of reproduction. By that time, microfilm had become an important means of preservation and reproduction in, especially, American libraries and archives.[3] A key technology that is often overlooked, however, was the photostat which was invented in the early 1900s and by the 1920s had made already quite an impact on scholarly work, including among Jewish historians.

Indeed, in 1927 American Jewish Historical Society President Abraham Rosenbach noted the following in his address for the society's 35th annual meeting: "By means of the photostat, records are much more easily and quickly copied than in the laborious way of the old historians so that results can be obtained in half the time".[9] As an example he mentioned historian Samuel Oppenheim, whose work focused on Jews in the Americas, the British and Dutch colonies included. Oppenheim was a prolific collector of materials and managed to obtain important documents from, for instance, the Dutch Portuguese Jewish community of Amsterdam and elsewhere; the photostat proved an indispensable tool to achieve his aims.[10] Importantly, the impact of Oppenheim's use of the photostat went much beyond saving time: it enabled him and others to expand the horizons of their research and study what previously could not be studied, or only with great difficulty and investment of resources.

Upon his death in 1928 Oppenheim's personal archive was obtained by the Society and would form the basis for other historians' research, for example Herbert Bloom's study of Brazilian Jewish History, which was published in 1934.[11] In that same decade, microfilm would become an important means of preservation and reproduction in, especially, American libraries and archives.[12] And here too, the Jewish documentary record was part of the effort; within the context of the Historical Records Survey (1935-1942), for instance, Jewish congregational records were microfilmed, and other types of documentation would follow suit.[13]

Meanwhile, punched card systems for data processing made there entry in academic research in the 1930s, not only in the sciences, but also anthropology, literature, the social sciences, and (economic) history.[14] In the 1940s geographers and demographers began to use the technology in the realm of Jewish Population Studies.[15] Then, in the late 1940s and early 1950s, work began on automated machine translation, concordances and word indexes and its impact in Jewish Studies

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[8] Karl Krumbacher, *Die Photographie Im Dienste Der Geisteswissenschaften* (Leipzig: B.G. Teubner, 1906); Otto Mente and Adolf Warschauer, *Die Anwendung Der Photographie Für Die Archivalische Praxis* (Leipzig: Hirzel, 1909).

[9] Abraham Rosenbach, Address of the President. *Publications of the American Jewish Historical Society* 31:1 1928).

[10] L. Huhner, 'Samuel Oppenheim', *Publications of the American Jewish Historical Society* 32 (1931) pp. 132–134.

[11] Herbert Bloom, 'A Study of Brazilian Jewish History, 1623-1654, based chiefly upon the findings of the late Samuel Oppenheim', *Publications of the American Jewish Historical Society* 33 (1934) 43-125.

[12] As chair of the Joint Committee on Materials for Research of the American Council for Learned Societies and the Social Science Research Council, the American historian, Robert Binkley was a staunch advocate of microfilm. See: Robert C. Binkley, *New Tools, New Recruits, for the Republic of Letters. A Memorandum* ([Place of publication not identified], 1934). URL: https://www.wallandbinkley.com/rcb/works/new-tools-new-recruits-for-the-republic-of-letters. See also his follow-up *Manual on Methods of Reproducing Research Materials. A Survey Made for the Joint Committee on Materials for Research of the Social Science Research Council and the American Council of Learned Societies* (Ann Arbor, Mich.: Edwards, 1936). For a short state of affairs in 1938: Ralph H. Parker, 'Mechanical Aids in College and University Libraries', *ALA, Bulletin* 32 (1938) 818-819.

[13] 'The Historical Records Survey: Activities and Publications', *The Library Quarterly*, 13/2 (1943) pp. 136–149. doi:10.1086/615898.

[14] G.W. Baehne, *Practical Applications of the Punched Card Method in Colleges and Universities* (New York: Columbia University Press, 1935).

[15] Sophia Robison and Joshua Starr, *Jewish Population Studies : Conference on Jewish Relations, New York, 1943* (New York: Conference on Jewish Relations, 1943).

would soon be felt.[16] On 26 March 1958, the Jesuit priest and scholar Roberto Busa and engineer Paul Tasman held a press conference at IBM headquarters in New York to describe their literary data processing work on the Dead Sea Scrolls using punched card technology. Their presentation made headlines all over the world and Busa subsequently also presented this research in July 1961 at the third World Congress of Jewish Studies in Jerusalem.[17] This work was an offshoot of Busa's work on the Index Thomisticus, begun in 1949 with the help of IBM, which would eventually earn him the reputation of 'founding father' of the Digital Humanities.[18]

Around the same time, great strides were made in the realm of Yiddish Studies and Yiddish linguistics to expand the use of punched cards to enable the processing of linguistic data. In 1961 the linguist Uriel Weinreich managed to acquire funding to use "machine aids" for the creation of the Language and Culture Atlas of Ashkenazic Jewry (LCAAJ). As Weinreich noted: "When one tries to visualize the editing of an atlas of many hundreds of maps, with up to 500 locations on each, it becomes clear what advantages are gained by the electronic filing and sorting of the data". [19] A few years later, in 1967, the Responsa Project launched, a computerized full-text retrieval system providing access to, as Yaacov Choueka described it, "Rabbinical case-law documents spanning more than ten centuries".[20]

As will be clear from this very sketchy overview, when Ekstein told his audience at the World Congress of Jewish Studies in 1969 that "the mechanical tools with which the researcher works have remained almost unchanged in the last five hundred years", he was missing some very important developments. At that point in time, the late 1960s, humanities computing had firmly taken hold in the academy with its own conferences and events being organised as well as its own publications. It would continue to develop as the era of mainframe computing began to give way to micro- and personal computers which were introduced at universities from the late 1970s onwards, and the Internet and World Wide Web arrived on the scene in the early 1990s. During all this time, librarians and archivists eagerly discussed the possible applications of new technologies, including for instance on the pages of the American journal *Judaica Librarianship*.[21]

More than discussing, they also actively sought to shape the future form of the Jewish documentary record. Thus, in October 1991, at a time when the PC had become a common tool for scholars and the Internet arrived at universities, the Leo Baeck Institute organised a conference on "Problems and Issues in Jewish Archives and Historiography in the Five New States of Germany". The meeting resulted in a plan to create a database of Jewish archival holdings in the states of the former German Democratic Republic (GDR) with the aim of enhancing access to these dispersed collections. In an echo of Ekstein's earlier vision, Robert Jacobs noted: "How very fortunate we are to live in a time when electronic capabilities enable us to provide bibliographic references that will allow subsequent generations of scholars to find the materials they seek with no more than a few

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[16] Dolores M. Burton, 'Automated Concordances and Word Indexes: The Fifties', *Computers and the Humanities* 15/1 (1981) doi:10.1007/BF02404370.

[17] Paul Tasman, *Indexing the Dead Sea Scrolls by Electronic Literary Data Processing Methods* (New York: IBM, 1958). For the global resonance see , for example, this set of articles on the Dutch Delpher website: http://bit.ly/2mu7htf [2 May 2018]. Busa himself reminisced about the occasion in: Roberto Busa. 'The Annals of Humanities Computing: The Index Thomisticus', *Computers and the Humanities* 14/2 (1980), 83-90, 85. https://doi.org/10.1007/bf02403798. For an elaborate analysis of this work see: Steven E. Jones, *Roberto Busa, S.J., and the Emergence of Humanities Computing: The Priest and the Punched Card*s (Routledge: London 2016) chapter 5.

[18] Steven Jones has complicated and contextualised this founding myth in his important work on Busa, see: Jones, *Roberto Busa*.

[19] Uriel Weinreich, 'Machine Aids in the Compilation of Linguistic Atlases', *American Philosophical Society Yearbook* 1963 (1964) 622-625.

[20] Yaacov Choueka, "Computerized Full-Text Retrieval Systems and Research in the Humanities: The Responsa Project." *Computers and the Humanities* 14/3 (November 1, 1980): 153–69. https://doi.org/10.1007/BF02403764.

[21] *Judaica Librarianship*, https://ajlpublishing.org/ (last accessed: 2 May 2018).

keystrokes."[22] The plan was an excellent example of the application of new technologies to further Jewish historical research. Importantly, the idea was to build an online catalogue, not a digitisation project, a point to which I will come back later.

At the same time, however, the publication of primary sources in the form of CD-ROMs and online databases and textual editions, led to a veritable sea change during the 1990s, enabling far easier access to materials and fundamentally changing scholarly information management practices. The impact of these developments on the field of Jewish Studies were a major focus of Heidi Lerner's *Perspectives on Technology* column in the Association of Jewish Studies' (AJS) *Perspectives* magazine, published on a regular basis between 2003 and 2011.[23] Lerner's 2002 article *New Technologies and Old Methodologies: Jewish Studies Research in the Digital Age* was probably one of the first to comprehensively address the possibilities that the digital turn offered for Jewish Studies scholars.[24] Then as now, librarians and archivists were at the forefront of digital developments and pointed the way for humanities scholars.

The early 2000s was also the period of the transition from humanities computing to what we now call 'digital humanities', characterised by mass digitisation, 'big data', and the proliferation of new tools and new forms of knowledge dissemination. To take stock of these developments in the field of Jewish history, the Center for Jewish History ran a workshop in 2011 entitled *From Access to Integration: Digital Technologies and the Study of Jewish History*, which sought to "explore in a systematic way new approaches to coordinating and integrating the digitization of Jewish historical sources around the world".[25] The workshop also aimed to connect Jewish Studies information specialists as a means of addressing the "challenges faced by many institutions in employing emerging technologies for the study of Jewish history".[26]

In his keynote lecture during the workshop, entitled "Digitization and its Discontents for Jewish History", historian Anthony Grafton outlined the various ways in which the digital turn was affecting academia and academic libraries, including the possibilities of digitally reuniting dispersed material. He also noted that much of Jewish scholarship happens outside academic circles, meaning that open access to online Jewish resources had become highly important.[27] Unfortunately, the various blog posts devoted to the conference do not reveal what, if any, answers were formulated as to the new approaches and challenges mentioned above, or indeed provide much detail as to what these were in the first place.[28] On Twitter, though, we find some traces of the debate as it took place. Librarian Deanna Marcum, for example, noted the international scope, long history and multilingualism as distinct features of Jewish Studies, while also stressing that all fields share certain fundamental needs for infrastructure, governance, funding, selection, etc.[29]

In 2013, the Institute for the History of the German Jews (Institut für die Geschichte der deutschen Juden) in Hamburg organised the workshop *Jüdische Geschichte digital* (digital Jewish

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[22] Robert Jacobs, 'Jewish archival holdings in the five new states of Germany. Creating an inventory', *Judaica Librarianship* 8/1 (1994) 17-22, 22. https://doi.org/10.14263/2330-2976.1222.

[23] AJS, Perspectives on Technology, https://www.associationforjewishstudies.org/what-is-jewish-studies/digital-jewish-studies/perspectives-on-technology (last accessed: 2 May 2018).

[24] Heidi Lerner, 'New technologies and old methodologies: Jewish Studies research in the digital age', *Shofar: An Interdisciplinary Journal of Jewish Studies* 20/4 (2002) 81-95. DOI: https://doi.org/10.1353/sho.2002.0073.

[25] From Arthur Kiron's introduction to: Anthony Grafton, *Digitization and its discontents for Jewish history. A talk delivered at the international conference "From Access to Integration: Digital Technologies and the Study of Jewish History Center for Jewish History"* (New York 2012) 2. http://www.cjh.org/CJHGraftonDigitization/ (last accessed 12 June 2014; no longer available online).

[26] Workshop "From Access to Integration: Digital Technologies and the Study of Jewish History", https://programs.cjh.org/archive/from-access-to-integration-digital-te (accessed: 20 March 2018).

[27] Grafton,: *Digitization and its discontents for Jewish history*, 17-19.

[28] https://16thstreet.tumblr.com/search/access+to+integration (accessed: 20 March 2018).

[29] https://twitter.com/search?l=&q=%23cjh-a2i&src=typd&lang=eng (accessed: 20 March 2018).

history).[30] Taking stock of a wide variety of digital projects pertaining to German-Jewish history, the event led to the creation of the network *Jüdische Geschichte digital* within the digital history working group of the *Historikerverband*, the German Historical Association.[31] The network is a platform for the exchange of knowledge and information about digital developments in the field of Jewish history.

Meanwhile, both the annual AJS conference and the European Association of Jewish Studies (EAJS) conference, held every four years, feature panels and workshops on Jewish Studies and Digital Humanities. In 2015, a conference entitled *On the Same Page: Digital Approaches to Hebrew Manuscripts* took place at King's College London.[32] A follow-up EAJS round table, *Turning the Page: Jewish Print Cultures & Digital Humanities*, at the University of Amsterdam in February 2017, dealt with "early modern print cultures and the specific questions associated with them, e.g. regarding Jewish multilingualism, geographical space, the linking of various disparate library and archive collections, and methods, scales and techniques of textual analysis."[33]

The EAJS recently established a *Digital Forum* to engage with digital scholarship more comprehensively. Meanwhile, *From "Tablet" to "Tablet": A Digital Humanities workshop* was held at the Institute for the History of the German Jews in Hamburg in September 2017.[34] The EAJS conference in Kraków in 2018 featured a panel on *Humanities in the mirror: writing Jewish history in a digital key*, which, by focusing on big data, sought to "address the question whether DH corpora and methods will enable us to find a new common ground in the field of Jewish history" and reconsider its *longue durée*.[35]

Finally, the international online conference *#DHJewish - Jewish Studies in the Digital Age* took place in January of this year, organised by the Center for Contemporary and Digital History (C²DH) at the University of Luxembourg. The conference is part of a bigger project which includes an online portal, which will be launched in December 2021, and will include a directory of projects on the intersection of Jewish Studies & Digital Humanities, a news and events section, an online community, as well as a Zotero bibliography.[36]

In short, in recent years there have been several efforts to understand and discuss how the digital turn has affected Jewish Studies and what its intersection with digital humanities looks like. At the same time, as the number of projects has exploded, and given that both Jewish Studies and Digital Humanities are broad umbrella terms covering a wide array of topics and approaches, it is nigh impossible to chart its intersections in a way that is anywhere near comprehensive. Let me therefore now turn to my own field, Jewish history, and ask how the digital turn has affected research practices there.

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[30] *Jüdische Geschichte digital* workshop, https://www.hsozkult.de/event/id/termine-22109 (last accessed: 20 March 2018). For a conference report see: Gerben Zaagsma, Tagungsbericht *Jüdische Geschichte digital*. 13.06.2013-14.06.2013, Hamburg, in: H-Soz-u-Kult 10.09.2013. www.hsozkult.de/conferencereport/id/tagungsberichte-5011 (accessed: 2 May 2018).

[31] Netzwerk Jüdische Geschichte digital, http://www.historikerverband.de/arbeitsgruppen/ag-digitale-gw/netzwerk-juedische-geschichte-digital.html (last accessed: 5 April 2018).

[32] Conference: On the Same Page: Digital Approaches to Hebrew Manuscripts, https://www.kcl.ac.uk/artshums/depts/trs/research/seminars/jewish/hebrew2015.aspx (last accessed: 20 March 2018).

[33] "EAJS Roundtable Report 'Turning the Page: Jewish Print Cultures & Digital Humanities'. Universiteit Van Amsterdam. February 2017", available online at: https://www.eurojewishstudies.org/colloquia/eajs-programme-in-jewish-studies/eajs-roundtable-report-turning-the-page/ (last accessed: 7 September 2017).

[34] This workshop was initiated by the author and the Rothschild Foundation and organised in cooperation with the Institute for the History of the German Jews.

[35] Bart Wallet and Irene Zwiep, 'Session 0.8.I/II: Humanities in the Mirror: Writing Jewish History in a Digital Key', *EAJS Quadrennial Congress, Kraków, 15-19 July 2018*.

[36] This website builds upon the foundational work that was done by Michelle Chesner, the Norman E. Alexander Librarian for Jewish Studies at Columbia University, who began collecting information about Jewish Studies/ Digital Humanities projects in 2015.

Charting the Digital Turn in Jewish History

As we have already seen, Jewish history has characteristics that produce specific challenges in the realm of information management: think of its textual tradition, its diasporic nature, the - forced - migration of people, texts, ideas, and thus its transnational aspects. These characteristics are, in turn, reflected in both the state of Jewish heritage (dispersal of sources and objects) and its nature (multilingual, multiscriptual and often textual). As a result, a key technological challenge for Jewish history in the digital age, and perhaps Jewish Studies more generally, is to work towards solutions for information retrieval and analysis from dispersed, multilingual and multiscriptual sources.[37] Much work in this direction has been done in the past three decades and it has allowed us to engage the transnational, interactional, inter-, intra- and crosscultural dimensions of Jewish history in new ways.

15 years ago Paula Hyman argued for the importance of comparative approaches to integrate what she called minority history into the history of majority populations.[38] Around the same time Moshe Rosman sought to probe the challenges that postmodernism posed for engaging with Jewish history, or Jewish histories, including questions of Jewish identity, periodisation, and intercultural relations.[39] Zwiep and Wallet have suggested more recently that 'big data' might be one answer to some of these questions as its longitudinal character can help us explore the *longue durée* of Jewish history.[40] If indeed some of the key tenets of Jewish historiography nowadays lie in studying inter- and intra-Jewish as well as Jewish/non-Jewish interactions, and in probing their fluid, constantly changing and evolving nature in space as well as in and over time, then digitisation and digital history are well placed to address the challenges involved.

Online resources make comparisons within and between Jewish populations as well as between Jewish and non-Jewish populations easier than ever; they can help answer the crucial question of what was specific for *which* Jewish experiences, and for *whose* Jewish experiences. Computational techniques allow us to trace long-term trends in, for instance, newspapers and thus shifting discourses and concerns; network analysis can help to chart the global migration of books and intellectual ideas and explore Jewish interconnectedness across borders; migration and migrant experiences can be traced, explored and compared through newspapers and other sources. Both the multiplicity and variety of Jewish histories and experiences and that what united and unified them are thus opened up for new and renewed explorations.

It would be impossible to give anything near a complete overview of the array of projects dedicated to Jewish history that have appeared online in the past three decades, but some characteristics can certainly be outlined. East European Jewish history & migration as well as the Holocaust, by their nature transnational themes, rank prominently next to a huge variety of national & local history projects, which often also exhibit transnational dimensions. Looking at the kind of materials put online, newspapers, books and manuscripts dominate. In terms of language, Yiddish has slowly but very surely acquired its place next to many projects offering Hebrew materials and of course artefacts in local languages.

In the realm of East European Jewish history and migration we find several YIVO projects such as the Encyclopedia of Jews in Eastern Europe and the soon to-be-completed Vilna Collections Project next to projects such as Memoria Viva and the Jewish Diaspora Collection (part of the University of Florida's Digital Collections) which focus on Latin America, including the Caribbean.[41]

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[37] Gerben Zaagsma, '#DHJewish – Jewish Studies in the Digital Age', *Medaon* 12 (2018) 1-11.

[38] Paula Hyman, 'Recent Trends in European Jewish Historiography', *Journal of Modern History* 77 (2005) 345-356.

[39] Moshe Rosman, *How Jewish Is Jewish History?* (Oxford: The Littman library of Jewish civilization, 2007).

[40] See note 35.

[41] See: https://yivoencyclopedia.org/default.aspx; https://www.yivo.org/vilna-collections-project; https://mviva.org/;

National, regional, and local history projects comprise too many to mention. Some examples with clear transnational dimensions include South African Jewish Museum's digital archive and the South Africa Jewish Rootsbank, Yiddish Melbourne, DigiBaeck.[42] More nationally focused projects include Key Documents of German-Jewish History and the Digital Library of the Italian Foundation Center for Contemporary Jewish Documentation.[43]

Newspapers constitute a very important type of sources. A key resource is the NLI's Historical Jewish Press website which, at the time of writing, contains 625 newspapers in 20 languages from all over the world, though with clear foci on the regions East Europe, the Middle East and North America, the Jewish languages Yiddish and Hebrew, and non-Jewish languages Arabic, Polish, French and English.[44] Of course other databases complement these holdings, a notable resource to mention is Compact Memory which contains 424 periodicals in 9 languages, the bulk being in German.[45]

The Holocaust is probably the single most important topic, covered by a wide range of resources that include the European Holocaust Research Infrastructure (EHRI), Arolsen Archives, the USC Shoah Foundation Institute's Visual History Archive Online (VHA Online), the German Memorial Book project, the Czech Holocaust Victims and Document Database and the New York Public Library's Yizkor Book Collection.[46] As so many Holocaust-related sources and testimonies have become available online, scholarly attention has shifted in recent years towards studying the nature of Holocaust memory in the digital age.[47]

While increased access to sources is obviously beneficial to all historians, it is the increased access to their computable data that can help them even further to ask and answer new questions or revisit old ones. Think, for instance, of topic modelling techniques that can help identify key concerns in sets of Jewish newspapers over time.[48] Or think about AI techniques to classify and revisit periodisations in source materials.[49] Or, think about new approaches to annotating texts *and* images in historical writing which allow scholars to query such materials in completely new ways.[50]

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https://ufdc.ufl.edu/judaica.

[42] See: https://sajmarchives.com/; http://www.jewishroots.uct.ac.za/; https://www.monash.edu/arts/acjc/yiddish-melbourne; https://www.lbi.org/collections/digibaeck/.

[43] See: https://jewish-history-online.net/; http://digital-library.cdec.it/cdec-web/.

[44] See: https://www.nli.org.il/en/discover/newspapers.

[45] See: https://sammlungen.ub.uni-frankfurt.de/cm/nav/index/title/.

[46] See: https://ehri-project.eu/; https://arolsen-archives.org/; https://vhaonline.usc.edu/; https://www.bundesarchiv.de/gedenkbuch/; https://www.holocaust.cz/databaze-obeti/; https://digitalcollections.nypl.org/collections/yizkor-book-collection#/.

[47] See especially: Jeffrey Shandler, *Holocaust Memory in the Digital Age : Survivors' Stories and New Media Practices* (Stanford: Stanford University Press, 2017). For Holocaust research in the digital age see the various articles in special issue no. 13 of *Quest. Issues in Contemporary Jewish History* in 2018. For the introduction: Laura Brazzo and Reto Speck, 'Holocaust Research and Archives in the Digital Age: Introduction', *Quest. Issues in Contemporary Jewish History*, 13 (2018) V-XIII.

[48] Oren Soffer, Zef Segal, Nurit Greidinger, Sinai Rusinek and Vered Silber-Varod,, 'Computational Analysis of Historical Hebrew Newspapers: Proof of Concept', *Zutot* 17/1 (2020). doi:10.1163/18750214-12171087.

[49] Shmuel Liebeskind and Chaya Liebeskind, 'Deep Learning for Period Classification of Historical Hebrew Texts', *Journal of Data Mining & Digital Humanities* (2020).

[50] Benjamin Kiessling, Robin Tissot, Daniel Stökl Ben Ezra, Peter Stokes, 'eScripta: A New Digital Platform for the Study of Historical Texts and Writing', *Digital Humanities 2019*, July 2019, Utrecht, Netherlands. hal-02310781.

Jewish History and the Politics of Digitisation

A different question to ask is what is being digitized? As digitisation opens up new avenues for research and can help overcome the classic problem of dispersal of sources, a crucial question to ask, though, is what (Jewish) heritage is available online and which stories about the (Jewish) past can (and cannot) be told using them. Few historians would deny that archives or libraries are repositories of carefully selected and curated collections and thus far from neutral: "No archive is innocent", as Elizabeth Yale noted (Yale 2015: p. 332). By the same token, the digitisation of historical sources, is far from neutral. Allusions to "the infinite archive" or "the age of abundance" notwithstanding, a large majority of archival material is not digitised, nor is there any institutional intention to do so in the foreseeable future. Archives, libraries, museums and other heritage institutions and organisations select materials to be digitised based on a variety of criteria. These include the preservation of fragile materials, easy access to collection highlights and/or often-used material, the research value of certain collections and academic research agendas. Memory politics, public discourses on the past, and the articulation of a country's imagined 'national' identity are of similar importance while legal, ethical, and copyright issues frame and possibly constrain digitisation strategies. Given the costs involved, the availability of funding, public or private, plays a key role in enabling digitisation projects in the first place.[51]

As digitisation entails a selection of already selected analog materials, historians find themselves facing old questions pertaining to new and unfamiliar digital environments. How do digital resources shape the historical themes, topics and debates that can be researched and how might they influence research agendas more broadly? In what ways do they enable us to address new research questions and venture into new research avenues that challenge existing master narratives? Can they facilitate research into transnational histories when most digitisation projects are, in one way or another, so often nationally framed? In sum: what are the histories that we can and cannot tell with digitised cultural heritage, and how could we as historians best navigate the challenges that are involved in using them? To be sure, the basic question of why, where and how we can access what we can access, and what histories can (and cannot) be written with them, has not changed after the digital turn. Yet as historians increasingly make use of digital resources in their research, they become ever more urgent.

What, then, are the politics of digitisation in the context of Jewish history and how can we ensure that the offline Jewish historical record remains as relevant as its online counterpart in an age where more and more scholars move to using online resources? Let me return to the example of digitised Jewish newspapers given above. Looking at the newspapers discussed it is clear that parts of Europe, Africa, Latin America and most of Asia are only covered to a limited extent. This holds also true for newspapers published in languages other than the major European languages, or Yiddish, Hebrew and Arabic. To be sure, the number of newspapers that potentially could be digitised is of course linked to the size of local Jewish populations. Nonetheless, the main point here should be clear; what is digitised shapes the stories we can tell.

At the same time, the history of the digitisation of Yiddish newspapers and archives is illustrative of the fluid and ever evolving nature of such issues. A decade ago, few Yiddish newspapers were available online whereas today the numbers run in the hundreds. Meanwhile the YIVO Vilna Online Collections project, which reunites the YIVO Institute's prewar library and archival collections in New York and Vilnius, is nearing completion. Combine this with the Yiddish Book Center's Digital Yiddish Library, which can now be full text searched, and the recent Union List of Yiddish publications in the collections of the YIVO, Yiddish Book Center, New York Public Library and National Library of Israel, and we face today a very different situation. Importantly, much if this work

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[51] See also: Gerben Zaagsma, 'On Digital History', *BMGN - Low Countries Historical Review* 128/4 (2013) 3-29.

was and is funded by private donors and individuals, the result being that it's the community itself that takes responsibility for digitising its own transnational heritage.

A Personal Example

To illustrate some of the effects of digitisation on Jewish historical research, on the level of the individual historian, I would like to provide you with a concrete example, based upon my own research of the past 15 years. To do so, I will provide three examples that relate broadly to search and context, online multilingual archives and machine translation, and the expansion of research options.

The first example relates to **search and awareness of context** when using digital resources. In my PhD research, which took place between 2003-2008, I compared how two Parisian daily Yiddish newspapers, *Naye Prese* and *Parizer Haynt*, wrote about Jewish volunteers who fought in the International Brigades during the Spanish Civil War. I consulted those newspapers on microfilm. To compare this to a non-Jewish example I also checked how the French Communist Party's newspaper *L'Humanité* wrote about French volunteers. *L'Humanité* is digitised and available on the Gallica platform of the Bibliothèque de France. Of course, a microfilm analysis means going by hand through the newspaper whereas , quickly checking *L'Humanité* is a matter of typing a few keywords and being transported to a page with search results. The latter process, however, not only saves an enormous amount of time; it also fundamentally alters a researcher's awareness of context, which is arguably the most significant and underrated problem facing historical research in the digital age, yet conspicuously absent from most discussions.

The traditional way of using newspapers by browsing a physical copy or microfilm will automatically provide a researcher with the (para-)context in which articles on the topic he or she is after should be seen (the context being the totality of the newspaper and its coverage). Moreover, it provides clues as to the 'weight' of an article – its size, the page on which it is printed, its position on a page and its lay-out, which all determine its visual prominence and thus its possible impact and reception. It also provides clues as to how the topic at hand is discursively related to other topics that are covered by a given newspaper. When using text-searchable digitised newspapers this process is turned around. A full-text search will yield a list of results in seconds, saving significant amounts of time. At the same time though, context gets lost as a researcher is transported to the micro-level and must 'zoom out' to explore how the articles that he/she is interested in relation to the wider coverage of the newspaper concerned.

Developments in topic modelling now allow for the exploration of topics and their interrelation, but such techniques are not applicable to the search phase; they require downloading the search results as a dataset upon which furher analysis can then be performed. This problem underscores the importance of involving historians in the process of creating online resources and the design of interfaces that allow for complex querying of data while simultaneously accounting for, and emphasising, an awareness of context. Such interfaces are beginning to be developed but we are still very far away from them becoming the standard. All of this is not to suggest we should go back to old-fashioned newspaper research. Indeed, recent developments in tools for querying newspaper databases open up the possibility of combining both distant and close reading in the analysis of historical newspapers. Yet it is crucial to realise how using digital sources changes our engagement

with and awareness of context and affects the historian's analysis.

My second example relates to **online archives and machine translation**. After finishing my PhD, it took several years to revise my thesis into a book. One reason for this was that I had been unable to consult critical parts of the International Brigades archive, which is part of the archive of the Communist International and housed in Moscow. The reason for not being able to consult these materials was that the archive, quite ironically, was being preprared for digitisation. Once the archive had gone online, however, it opened hitherto unavailable possibilities, for instance in the realm of multilinguality. I was interested in what the Polish brigade press possibly published about Jewish volunteers in its midst. After downloading all Polish brigade press publications in the archive, I compiled the images for OCR which then gave me the option to perform a text search for relevant content. While I do not know Polish, I do know what Polish words to search for, and machine translation then allowed me to explore the potential importance of articles containing references to Jews and anti-Semitism. To be very clear: machine translation can *not* replace human translation, but it is a powerful exploratory tool to find potentially relevant material and is likely to transform how historians engage with multilingual archives in the future.

My third example illustrates how digitsation might **expand the possibilities of what can be researched**. It draws upon research for an article about the heroic cult that developed around Naftali Botwin, name giver of the Botwin Company in the International Brigades. Botwin was a young Polish-Jewish communist who was executed by the Polish authorities in the city of Lwów in August 1925, following a trial in which he was convicted for assassinating a police infiltrator in the ranks of the Polish Communist Party (KPP). That article drew heavily upon trial reports published in the Yiddish press of the time, which are available on the Lithuanian National Library's digital platform. In addition, by using Compact Memory and Gallica, I could draw upon the resonance of Botwin's trial in the general Jewish, as well as European communist press. This comparative small study could not have been done without online access to digitised newspapers from various countries.

Outlook

In this paper, I have sought to provide a historical context to the digital turn in Jewish Studies, and especially Jewish history, and ask how technology has affected its study in the past and present. With the above in mind, what could the future hold for research into Jewish history? Three challenges come to mind.

The first challenge relates to education and the public at large. In this lecture I have confined myself mostly to the academic study of Jewish history but all the resources I have mentioned are used by and aimed at much broader audiences. An especially important question to ask is how digital resources can be used for educational purposes within the context of the rapid spread and increasing normalisation of anti-Semitic conspiracy theories on social media, especially in the wake of the current covid pandemic. This is a question where all historians of Jewish history, whether they work in public history or not, have an important role to play.

The second challenge relates to digital resources themselves and the crucial importance of increasing access to the information contained *within* them. Three years ago, the books in the Digital Yiddish Library were not text searchable; today they *are* text searchable. Moreover, developments in HTR will soon enable similar access to archival materials; imagine a situation where the handwriting, images, and photos in the YIVO Vilna Online Collections can be searched in addition to printed text.

The third and final challenge lies in the realm of interlinking and integrating resources. In the last

few years this challenge has been picked in several fields, in the Jewish Studies context the International Collection of Digitized Hebrew Manuscripts (KTIV) comes to mind. The JudaicaLink project in Germany is now working on the interlinking of structural information from many existing reference works of Jewish culture and history. Both the European Holocaust Research Infrastructure (EHRI) and Yerusha databases provide access to archival descriptions and metadata from many archives. The latter highlights the crucial importance of cataloguing, which is often forgotten: if we recognise that many archives will not be digitised in the foreseeable future, if ever, there is a clear challenge: online cataloguing and linking of archival descriptions is as important as digitisation; this is precisely what projects like EHRI and Yerusha do and why they fulfil such a crucial function.

For a comprehensive account of a given historical topic it is imperative to make use (or at least be aware) of the full range of material available to study that topic, whether this can be found online or offline. It is also for this reason that the phrase "hidden archives", which is sometimes used to describe those archives and/or their catalogues that are not accessible online, is so problematic: labelling traditional archives as "hidden" semantically assigns them a problematic status and renders them obscure. Without the ability to even find out online about the *existence* of relevant materials, the question of whether they exist in digitised form becomes moot. In short, there exists a strong argument for giving preference to online cataloguing over digitisation, certainly in the case of materials where neither is done, as well as for linking online archives to related offline resources.

Addressing these challenges will go a long way to bring about the potential of the digital turn for research into Jewish history and, more broadly, a fuller understanding of its manifold and multifaceted trajectories.