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Fostering Digital History: integrating digital research skills into an undergraduate History curriculum

Introduction

This essay describes and reflects on the integration of computational research skills into core (that is, compulsory) components of the BA History degree programme at the University of Sussex. Work on this began in Spring/Summer 2015 and was delivered as part of two Year 1 modules that ran in the 2015/16 academic year: The Early Modern World (Autumn term) and The Making of the Modern World (Spring Term). The work was undertaken by Tim Hitchcock, Sharon Webb, and James Baker, academic staff in the Department of History with expertise in computational research through their work in Digital History and Digital Humanities.

The essay is important from a teaching and learning perspective for three reasons:

- 1) In the context of a History degree programme, delivering core historical and historiographical knowledge alongside skills development presents challenges to both learners and teachers.
- 2) The work intends to construct a fresh intellectual trajectory for our History undergraduates. In light of digital transformations in society and culture, we believe the core intellectual outcomes of this endeavour are significant both to the development of the Historical profession and of History undergraduates as engaged, informed, and curious citizens. Nevertheless this must be balanced against an understanding that learners may not have expected Digital History to form a core component of their learning: few, for example, would have anticipated modules that sought to problematise both historians' trepidation towards and resistance to numbers and the notion that numbers (especially numbers visualised as graphs or maps) contain objective truth.
- 3) There are few precedents for BA History programmes having been reorientated around the perspectives of Digital History, and hence our work is both pioneering and is a model other educators can build on.

Background

Why computational research skills? Why Digital History? And why now? Computational work is not new to History. Since the mid-twentieth century economic and demographic historians have used computational technologies to

organise, process, and present historical data.¹ Concurrently geographers used geospatial information systems to interpret that data in a geographical frame. The value of these methods to Historical research were sharply contested in their time, especially methods – such as those used in Cliometrics – that closely resembled methods more common in the quantitative social sciences. One outcome of the 'Culture Wars' was the dislocation of economic and demographic history from the central concerns of the History profession, replaced by an expanded cultural history sensitive to gender, sexuality, race, ethnicity, emotion, and representation.²

From the mid-1990s onwards the falling costs of, rising familiarity with, and improved access to computational and network technologies catalysed a mass digitisation of heritage into historical data. Alongside this the range of computational tools available to historians with which they could organise, process, and present that historical data increased.³ As Steven Jones writes in his 2013 book *The Emergence of the Digital Humanities*:

The emergence of the new digital humanities isn't an isolated academic phenomenon. The institutional and disciplinary changes are part of a larger cultural shift, inside and outside the academy, a rapid cycle of emergence and convergence in technology and culture.⁴

Pioneering projects in Digital History share the strong emphasis on methodology implied by a category of intellectual enquiry that emerged alongside new possibilities for organising, processing, and presenting historical sources. Old Bailey Online, London Lives, Connected Histories, and Locating London's Past all put records of everyday historical lives online, brought structured and unstructured

¹ Jacob M. Price, 'Recent Quantitative Work in History: A Survey of the Main Trends', *History and Theory* 9 (1 January 1969): 1–13, doi:10.2307/2504167.

² On the 'Cultural Wars', see Lawrence Stone, 'The Revival of Narrative: Reflections on a New Old History', *Past & Present*, no. 85 (1 November 1979): 3–24. On the modes of historical enquiry since see, for example, the changing emphasis between editions of text books such as Tosh's *The Pursuit of History*; John Tosh, *The Pursuit of History: Aims, Methods and New Directions in the Study of Modern History*, 2nd ed. (London : Longman, 1991); John Tosh, *The Pursuit of History*, 5th ed. (Harlow : Longman, 2010); James Baker, 'A History of History through the Lens of Our Digital Present, the Traditions That Shape and Constrain Data Driven Historical Research, and What Librarians Can Do about It', in *Laying the Foundation: Digital Humanities in Academic Libraries*, ed. John W. White and Heather Gilbert (Indiana, United States: Purdue University Press, 2016), <http://sro.sussex.ac.uk/59763/>.

³ Jo Guldi and David Armitage, *The History Manifesto* (Cambridge: Cambridge University Press, 2014).

⁴ Steven E. (Steven Edward) Jones, *The Emergence of the Digital Humanities* (New York ; Routledge, 2014), 31.

humanities data to new audiences, and new audiences to data-driven and computational approaches to historical problems.⁵ Dirty Books used a densitometer to study traces of human interaction with the bottom right hand corners of medieval prayer books and in so doing approached an understanding of the use of those prayer books.⁶ The Virtual Paul's Cross Project modelled sound and space to recreate a lost past experience – the experience of hearing an early modern sermon at St Pauls' Cross, an outdoor space beside medieval St Paul's Cathedral, a structure that was lost during the Great Fire of London in 1666 – and in so doing empowered historians to infer fresh insights into how sermons would have been delivered in an unamplified and noisy environment.⁷ And Ian Milligan has enriched our understanding of childhood in Canada in the late-twentieth century and has in so doing demonstrated how blending traditional elements of the historian's toolkit – sampling, source analysis, close reading – with computational clustering and networking of data can bring the World Wide Web within the purview of historical research;⁸ a World Wide Web whose early history is now the topic of historical study and whose billions of archived pages requires computational skills beyond familiar office suites to organise, process, and present.⁹ This Digital History has gathered critical histories and in Rens Bod's *A New History of the Humanities* a text that affirms a deep history of pattern matching in the humanistic method and in so doing makes it clear that Digital History is no techno-evangelist disjuncture but

⁵ Sharon Howard, “Bloody Code: Reflecting on a Decade of the Old Bailey Online and the Digital Futures of Our Criminal Past”, *Law, Crime & History* 5, no. 1 (2015), <http://www.pbs.plymouth.ac.uk/solon/journal/vol.5%20issue1%202015/Howard%20Bloody%20Code.pdf>.

⁶ Kathryn Rudy, ‘Dirty Books: Quantifying Patterns of Use in Medieval Manuscripts Using a Densitometer’, *Journal of Historians of Netherlandish Art* 2, no. 1–2 (June 2010), doi:10.5092/jhna.2010.2.1.1.

⁷ John Wall, ‘Virtual Pauls Cross Project: A Digital Re-Creation of John Donnes’ Gunpower Day Sermon’, 2013, <https://vpcp.chass.ncsu.edu/>.

⁸ Ian Milligan, ‘Mining the “Internet Graveyard”: Rethinking the Historians’ Toolkit’, *Journal of the Canadian Historical Association* 23, no. 2 (2012): 21, doi:10.7202/1015788ar; Ian Milligan, Nick Ruest, and Anna St.Onge, ‘The Great WARC Adventure : Using SIPS, AIPS and DIPS to Document SLAAPS’, *Digital Studies / Le Champ Numérique* 0, no. 0 (31 March 2016), http://www.digitalstudies.org/ojs/index.php/digital_studies/article/view/325.

⁹ This summary of Digital History also appears in Baker, ‘A History of History through the Lens of Our Digital Present, the Traditions That Shape and Constrain Data Driven Historical Research, and What Librarians Can Do about It’.

rather an assimilable outgrowth of History's intellectual heritage and concerns.¹⁰
(K1)

In short, Digital History is now a recognised part of the Historical profession that is rapidly growing in importance. In response, the last five years has seen the appearance of MA programmes, PhD studentships, Postdocs, Lectureships, and Professorships in Digital History.¹¹ Undergraduate programmes have not kept pace with this development, meaning that few undergraduates have the grounding in Digital History required to access these opportunities, this in spite of a growing pedagogical literature around Digital History.¹² As a consequence, those who move from undergraduate History programmes to postgraduate roles in Digital History face steep learning curves and significant challenges in balancing the acquisition of core Historical knowledge and computational skills. (V4)

As researchers in Digital History and the Digital Humanities and as research-led teachers, Hitchcock, Webb, and I are committed to bringing the computational skills and digital approaches that we value to our students; to enriching our sub-field and normalising the skills and approaches of our sub-field within the Historical grounding our undergraduates receive, this with both their and wider societal

¹⁰ Rens Bod, *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present* (Oxford: Oxford Univ. Press, 2013).

¹¹ Jo Pugh, 'Time Machines and How to Use Them : An Overview of Digital Humanities Teaching and Research', June 2014, <https://dlib.york.ac.uk/yodl/app/home/detail?id=york%3a823026&ref=search>.

¹² T. Mills Kelly, *Teaching History in the Digital Age*, 2013, <http://hdl.handle.net/2027/spo.12146032.0001.001>; M. H. Beals, 'Workshop: Slow Down! Teaching Students to Encode Their Close Reading', *M. H. Beals*, 8 September 2015, <http://mhbeals.com/workshop-slow-down-teaching-students-to-encode-their-close-reading/>; Lincoln Mullen, 'Learning How to Teach History in a Digital Age', *The Chronicle of Higher Education*, *ProfHacker*, (26 August 2013), <http://chronicle.com/blogs/profhacker/learning-how-to-teach-history-in-a-digital-age/51875>; Adam Crymble, 'The Origin of the Student Species', *The IHR Blog*, 17 May 2016, <http://blog.history.ac.uk/2016/05/the-origin-of-the-student-species/>; Heather Froehlich, 'On Teaching Coding to English Studies Students', *Heather Froehlich*, 29 January 2014, <http://hfroehlich.wordpress.com/2014/01/29/on-teaching-coding-to-english-studies-students/>; Adam Crymble, 'Exploring Big Historical Data: The Historian's Macroscope', *Reviews in History*, 2016, <http://www.history.ac.uk/reviews/review/1889>; William J. Turkel, Shezan Muhammedi, and Mary Beth Start, 'Grounding Digital History in the History of Computing', *IEEE Annals of the History of Computing*, June 2014.

benefits in mind.¹³ This essay discusses the implementation of these values, namely the integration of digital and computational research skills into a core component of the Year 1 History curriculum at the University of Sussex. The essay is divided into three parts. The first describes in both general and local terms the rationale for integrating computational and digital skills into our History programme. The second describes the planning and delivery of the new content. The third describes lessons learnt from implementation during the 2015-16 academic year and plans for the 2016-17 year.

Rationale

In 1962, Louis Mumford observed that 'minds unduly fascinated by computers carefully confine themselves to asking only the kind of question that computers can answer'. In the last couple of decades historians who continue to represent their research as reading 'books and articles' have restricted themselves to asking only the kind of questions physical books and articles can answer [...] We need to recognize that we are no longer reading books and articles, but are working with massive bodies of digital text – the difference between one volume and another little more than a line or two of metadata.

Tim Hitchcock, 'Confronting the Digital: Or How Academic History Writing Lost the Plot'.¹⁴

In a report on existing Digital Humanities teaching commissioned by the University of York, Jo Pugh surveyed undergraduate history students on their attitude towards and interest in learning digital humanities research skills as part of their BA programme.¹⁵ Over 80% agreed that "in the future, digital methods will be part of the mainstream work of all historians" and that "familiarity with digital technologies will make me more employable". Less than 50%, however, were confident that they knew what the Digital Humanities was or how to critique digital collections and documents. Given a list of potential topics – digitization, web design, social media, digital preservation, programming, mapping, data analysis, crowdsourcing, markup, copyright – and asked to decide which they'd be interested in learning about, the cohort showed little consensus, though erred towards softer skills (digitisation, web design, social media). As Pugh concludes:

Students were modest about their technical skills, expressed uncertainty in working with digital collections and objects (though they expressed a desire to learn more) and while in aggregate they work with a diverse range of online resources, they have a tendency to cleave to tried and tested digital resources. At the same time, respondents understood clearly the value of digital technologies in their

¹³ Select Committee on Digital Skills, 'Make or Break: The UK's Digital Future' (House of Lords, 17 February 2015).

¹⁴ Tim Hitchcock, 'Confronting the Digital: Or How Academic History Writing Lost the Plot', *Cultural and Social History* 10, no. 1 (2013): 9–23, doi:10.2752/147800413X13515292098070.

¹⁵ Pugh, 'Time Machines and How to Use Them : An Overview of Digital Humanities Teaching and Research'.

future research and careers even if they were perhaps hazy about what that research and those techniques might be like.¹⁶

The rationale for integrating Digital History into our undergraduate curriculum is to bridge the position Hitchcock takes and the situation Pugh observes; that is:

- To recognise the reality of how historians research today;
- To embrace the possibilities students see for the history profession;
- To teach computational methods at the service of good history writing;
- To provide useful skills for students whose careers will mostly likely fall outside of the profession.

Our starting point is that a variety and volume of digital documents are a feature of modern work, whether that work is conducted by a historian or a scientist, a journalist or an administrator. In order to work effectively we must be able to marshal those documents, our interfaces with them, and the portals that provide access to them. To work with them at an advanced level requires an understanding of and critical faculty towards those documents, interfaces, and portals. History, an academic discipline 'working with massive bodies of digital text' – as well as digitised and born-digital images, video, audio, code, and metadata – is an ideal environment in which to develop those critical skills. Indeed the very refusal, identified by Hitchcock, of historians to accept this reality thrusts front and centre the profession's uneasy traversal of physical and digital documents, interfaces, and portals. As Stephen Jones argues in *The Emergence of the Digital Humanities* (2014) Digital Humanities, as a field of work obsessed with unpicking the assumptions behind research methods, has reappraised the act of digitisation such that a process once considered merely a replication of a thing, a conversion of a physical object into ones and zeros with direct preservation and access benefits, has been reborn as a gateway for transformation of physical things into new research objects with their own associated affordances and challenges; a transformation that can enrich, connect, and reconfigure the original data point, the thing itself.¹⁷

This has been difficult for historians to embrace, and yet embrace it they must. In my own supervisory work with a Doctoral Student based at the University of Sheffield, I have observed that it is hard to get a excellent young scholar from no digital to enough digital fast enough within the tight timescales of a three year PHD, and yet more importantly that leaving digital to the PhD means you already have to cross the hurdle of digital seeming different, seeming something as incompatible with or as an adjunct of History work. Indeed the rationale behind that PhD programme, a Collaborative Doctoral Studentship co-funded with the British

¹⁶ Ibid., 26.

¹⁷ For further discussion see James Baker, 'Steven E. Jones, *The Emergence of the Digital Humanities*', *Reviews in History*, no. 1634 (2014), doi:10.14296/RiH/2014/1634.

Library, was from the perspective of the latter to better understand how historians learn computational research skills in order to better support their work with the vast swathes of digital data that institution now holds: the British Library holds around 170 million physical items to which since 2013 it has been adding 2 billion web pages a year from the UK web domain alone (A2).¹⁸

In a sense my job and comparable 'Digital History' positions at Hertfordshire, Loughborough, and the Institute of History Research are recognition that the profession needs to be shaken into embracing digital resources and techniques by developing a mature critical approach to digital resources and techniques. Hitchcock, Webb, and I see changes to undergraduate teaching as fundamental to delivering that much needed jolt. Since 2015 the History Department at the University of Sussex has 'sold' its programme to prospective undergraduates on its research led, global, and digital character. Since 2014 Hitchcock has offered a 'Digital London' special subject module to Year 3 students, a module that takes computational approaches to the social and culture history of London. And the department specialises in contemporary history, offering modules throughout the degree programme whose chronological scope includes the 1990s and early-2000s, periods that also saw the birth of born-digital record keeping and the ages of the WWW, the hard disk, and the smartphone respectively.

Integrating Digital History at the beginning of the undergraduate curriculum then is logical, tactical, and political: logical because it provides the skills our undergraduates will need to flourish in Year 2 and 3 of their degrees; tactical because it aims to produce 'Digital Historians' who will enrich, improve, and grow our work; and political because it places the department at the centre of changes to the Historical profession. It also serves to embolden students arriving at university to question what history is, what historians do, and how they do it. That said, we remain sensitive to the challenges – both academic and pastoral – faced by Year 1 students, a group with a wide range of backgrounds and skills.¹⁹ The Higher Education Academy's report 'History, Classics and Archaeology: Inclusive curriculum design in higher education' notes that Year 1 History students mention a range of challenges that include 'the expectedly steep rise in difficulty' and the 'level

¹⁸ James Baker, '#bldigital British Library Collaborative PhD studentship', *British Library Digital Scholarship Blog* (24 February 2014) <http://britishlibrary.typepad.co.uk/digital-scholarship/2014/02/bldigital-british-library-collaborative-phd-studentship.html>

¹⁹ Gareth Hughes and Olivia Smail, 'Which Aspects of University Life Are Most and Least Helpful in the Transition to HE? A Qualitative Snapshot of Student Perceptions', *Journal of Further and Higher Education* 39, no. 4 (4 July 2015): 466–80, doi:10.1080/0309877X.2014.971109.

of background reading required'.²⁰ As the following section of this essay describes, we designed the integration of Digital History in the Year 1 curriculum with the intention of not exacerbating those challenges.

One example is worth mentioning here as it dovetails with our rationale. (K2) As we were keen to ensure that Year 1 students saw Digital History as part of rather than adjunct to History, our programme included lectures whose 'digital' character was deliberately underplayed: lectures on the perennial problem of 'What is History?' and how to read history writing, as well as session on referencing, using the library, and using archival collections. As the aforementioned Higher Education Academy report states:

Designing opportunities for History students to audit and then develop skills such as note-taking and using libraries effectively would enhance the experience of all students studying the past.²¹

By building these opportunities into our digital skills offer, we sought both to bridge Digital History and History and to situate the former within an amelioration of the challenges and anxieties students face at the beginning of a History degree. (K3)

This integration of the Digital History offering within the History programme was underscored by the sessions being delivered as part of two Year 1 modules that ran in the 2015/16 academic year: The Early Modern World (Autumn term) and The Making of the Modern World (Spring term). In order for student's critical positions on digital resources and techniques to develop in the context of learning History, this was crucial. Embedded alongside seminars and lectures on historical themes and narratives, we were able to integrate those themes and narratives into our explorations of digital research technologies, to describe advances in our knowledge of those themes and narratives made through the use of digital research technologies, and to normalise the presence of problems on the historical method in the digital age in assessments otherwise testing students on their knowledge of those themes and narratives.

Planning and Delivery

In the planning and delivery of the integration of digital history into our undergraduate history curriculum, we wrestled with two key problems faced by many comparable initiatives in the sector (V3): that is, to quote Pugh 'Where should the balance lie between digital and the humanities in a DH course?' and 'What are the skills that are most needed given the limited time to deliver a course?'.²² On the

²⁰ Higher Education Academy, 'History, Classics and Archaeology: Inclusive Curriculum Design in Higher Education' (Higher Education Academy, 2011), 2.

²¹ Ibid.

²² Pugh, 'Time Machines and How to Use Them : An Overview of Digital Humanities Teaching and Research', 21.

first problem, we – as stated previously – aimed to ensure that our digital skills sessions put History before the Digital: that they marked out digital resources and methods as new and interesting and important, but that our collective interest in them was not at the expense of History, all we asked – *pace* Mumford – was that historians were honest about the role of and potential for Digital in History. On the second problem, the balance of digital within the 'course' was set: a single one-hour lecture each week of The Early Modern World and The Making of the Modern World modules was reserved for our 'Digital Skills' sessions; that is, twenty-two lectures across the Year 1 programme, one-quarter of the contact time (excluding office hours) for each module. These lectures were delivered to the total Year 1 History BA and History joint-honours cohort – 171 students – and correspondingly were held in a large lecture theatre. No seminar time was dedicated to content covered in the Digital Skills lectures, though seminar leaders were free to integrate elements at their discretion. As both modules included lectures delivered by various colleagues (in line with their research expertise) and multiple seminar leaders, integration into all areas of the modules – particularly given the short gestation of the Digital Skills lectures, more on which in the next section – was suboptimal. And so whilst the lecture format gave the Digital Skills content prominence within the module, it also constrained the interactive possibilities for learning: not least due to the inflexibility of lecture theatres as spaces. Finally, the Digital Skills sessions were also only thinly tied to assessment: no specific 'digital' assessments – either formative or summative – were planned, the only direct integration with assessment were exam questions on Digital History and the content we choose to connect with the historical themes and narratives covered in the two host modules. (A1)

Knowing what we had to do – deliver twenty-two lectures on digital and computational research skills for historians tied to two core Year 1 History modules whose themes and narratives progressed chronologically – we began work. As neither Webb nor I took up our posts at the University of Sussex until 1 September 2015, our first task was to establish what we were good at, what we knew about, what we were passionate about, and what we thought needed to be covered. Both Webb and I had experience teaching digital research skills in a humanities context, and these experience formed the core of the sessions we delivered.

Titles and abstracts of 2015-16 Digital Skills lectures can be found in Appendix I (A2). The Autumn programme began with three lectures that introduced key concepts that frame historical practice: why History matters and what historians do; how digital sources, the World Wide Web, and computational approaches can change the role of History and the historian; and how historians work with sources of past phenomena. These were followed by lectures designed to help students better understand what they do online in the context of history work: using metadata to semi-automate citation capture and reuse, search strategies, judging the webpages that host the primary sources those searches find, and the changing communication channels in which historians are operating. The final three lectures asked students to think through and experiment with new modes of history work: making web pages, using image recognition platforms, and undertaking textual

analysis and visualisation of primary sources. The Spring programme moved towards exploring Digital History more closely and began with a lecture on the properties of good Digital History programmes followed by a developed case study. These were followed by three sessions on digital sources: first in libraries, second in the context of digital preservation, and third in archives. The programme ended with four lectures that focused on practical skills: using command line tools to download, count, and mine 18 million historical newspaper pages; geocoding and mapping publication data from 54,000 historic books; cleaning up and normalising metadata for those historic books; and visualising patterns that emerge from that cleaned and normalised data. A lecture on referencing was also provided. (V2)

To avoid discussing methods and technologies in abstraction, examples used in these lectures drew on the topics students were encountering in the other lectures and seminars that comprised the Early Modern World and the Making of the Modern World modules. (V4) For example, lecture 4 'Zotero and Citation' took place during a week on China in the European imagination and so started with the following scenario:

When you use a library catalogue to search for secondary material for an essay on, say, Matteo Ricci's activities in China, the library systems you use guide you via metadata about books and articles, information such as their titles, dates of publication, authors.

Complimenting lectures and seminars on Captain Cook's exploration of the South Seas, Lecture 11 'Ngrams, Voyant, Corpus' had students experiment with Cook's diaries as data and visualise linguistic patterns in Voyant.²³ Lecture 17 'Data and the Past' built on discussions around German nationalism to mine contemporary newspaper pages for mentions of 'Reich', 'Kaiser', and 'Preußen'. Finally, in order to reinforce learning around the properties of 'good' Digital History, each Spring term lecture began with an example of 'good' projects or research whose historical content or focus was relevant to the historical topic under examination in the Making of the Modern World that week.

As Digital History is as much practical as methodological, we were keen to ensure that students undertook hands-on work with software and data in these lectures. In advance of each lecture that included a practical element, notices that described what students needed to do in advance of the lecture were posted on StudyDirect (Sussex's virtual learning environment) and via email. (A4, K4) For example, the notice for Lecture 20 'Making Raw Data Your Data' was as follows:

NOTE: if you want to follow along in the lecture please bring a laptop (or work with a friend; not a tablet/phone) on which you have in advance a) downloaded the data below (MMW-wk10-BLMSbook-list-subset.csv), b) downloaded and installed OpenRefine 2.6 (see instructions at <http://openrefine.org/download.html>) and c) run OpenRefine (see instructions at <https://github.com/OpenRefine/OpenRefine/wiki/Installation-Instructions>) and point to

²³ Stéfan Sinclair, Geoffrey Rockwell and the Voyant Tools Team, *Voyant Tools* (2012) <http://voyant-tools.org/> Accessed 22 June 2016

<http://127.0.0.1:3333/> in your web browser (not Internet Explorer) to check it is working. ANY problems email me at james.baker@sussex.ac.uk. As with the mapping lecture, there is no disadvantage to you if you can't do this as I will demo everything on the screen.

Having students work on their own laptops required Webb and I to troubleshoot installation issues both before and during each lecture. (A3) At the time and on reflection we considered neither this nor a lack of training workstations in the learning environment as problematic. Rather, we took the view that learning of this kind is best suited to working on one's own device, as it ensures that learning takes place in a familiar computational environment and that approaches encountered can be replicated outside of the learning environment without post-class setup and installation work becoming a barrier to learning.²⁴ As the final line of our notice to students made clear, however, following along with the practical was not compulsory. Attentive to potential economic disparities between students, we could not expect every student to bring a laptop to these lectures. (V1, V2) To turn this to our advantage, we encouraged students to share their laptops and built the practical exercises around peer programming: that is, whilst parts of these lectures involved students following along to a demonstration on the screen, short guided exercises were built in as well. For example, Lecture 18 'Georeferencing and Mapping historical data' asked students to work in small groups to estimate the current latitude and longitude of London addresses that no longer exist using Locating London's Past and OpenStreetMap.

The guidance provided to students around practical lectures evolved as the programme was delivered. (A3) This evolution was a common theme of the lectures in general. Indeed although Appendix I creates the illusion that a rigid set of lectures were planned from the outset, programme delivery was an iterative process. Titles and topics of each lecture were agreed before the beginning of the Autumn term, but lecture abstracts were not completed and posted to StudyDirect until around a month in advance of each lecture. This enabled us to be flexible on the specific content of each lecture and responsive to student needs and to observations of their competency. (V3) On the latter, the practical exercises became a useful barometer of digital literacy and how that literacy impacted on student's confidence to download and install unfamiliar software, read historical data, and work through computer based tasks.

Lessons learnt and future plans

Looking back on the year, many successes can be identified. All the Digital Skills lectures were delivered, a feat not insubstantial given the tight turnaround. Areas of overlap between the lectures were managed effectively, ensuring that potential duplication was repurposed as reaffirmation of key themes that gave the lecture series intellectual coherence. Colleagues who attended the lectures as part of the

²⁴ Greg Wilson, 'Software Carpentry: Lessons Learned', *arXiv:1307.5448 [Physics]*, 20 July 2013, <http://arxiv.org/abs/1307.5448>.

peer assessment programme with the School of History, Art History, and Philosophy reported favourably on the content and delivery. Indeed there success is indicated by the fact that for the 2016-17 academic year, the lectures will also be attended by Year 1 Art History BA student as part of their 'Stories of Art' module (more on which below). (K6)

There is of course room for improvement. As Webb and I were both returning to teaching in Higher Education in 2015-16, we were readapting to teaching at the same time as delivering new content, and so timings, programme coherence, and the appropriateness of material for Year 1 students would all benefit from examination. The interactive sessions were also not as interactive as we'd hoped. Students did bring laptops and did work in teams, but it proved challenging to manage a large hands-on class in a lecture theatre setting whilst also demonstrating for those without access to a laptop. As a result, careful thought has gone into how we can better deliver these sessions (more on which below).

Reexamination and adaptation of the programme has also been informed by feedback from students. (K5) In week 9 of the Spring term seminar leaders for The Making of the Modern World distributed a short survey in class which asked students to respond to three questions: 'What was the main theme of the digital skills lectures?', 'What went well?', and 'Would could be improved?'. The rationale for this survey was to better understand whether or not the key messages of the Digital Skills lectures had been communicated effectively to the cohort, alongside giving students an opportunity to shape future iterations of the series through their comments on what went well and what could be improved.

It is not my intention to provide a thorough analysis of the survey, nevertheless a few threads can be teased out. On the main themes of the lectures, students identified as central the application of digital techniques and technologies to the study of the past, an understanding of what digitised sources are, ways of storing and analysing data, and the need for these skills. Although none mentioned the critical perspective we sought to engender, this was pleasing. Students reported enjoying learning about ways to organise their sources, digital repositories available to them, how to search online effectively, and software tools they can use to analyse sources, as well as the use of examples, live demos, and interactive sessions. A consistent preference was held for sessions that directly supported their essay writing, a refrain visible in students responses to what could be improved, though here there was a greater variety of responses: whilst one student reported finding the sessions 'common-sense really', another found some topics 'too complicated'; whilst some wanted the sessions to be optional, others wanted them embedded into seminar teaching. A sense emerges, nevertheless, that more practical, more interactivity, more considered ordering, and a closer alignment with historical topics at hand would be welcomed by the cohort.

Based on these responses, as well as our reflections on the lecture series and the comments of colleagues, we identified three key objectives for improving the 2016-17 offer. (A5) The first is to present a clearer narrative across the series, with skills

such as library use and referencing at the beginning of the programme where they are most needed. The second is to better integrate with *The Early Modern World* and *The Making of the Modern World* by shifting from linking to examples from seminars and lectures on a week-by-week basis, to using examples that run across a number of digital skills lectures and thus prove coherent integration with the module and stronger examples of history in practice. The third is to offer theory and practice around a particular digital history theme – for example, visualisation – in separate lectures rather than attempt to do both in one. The latter decision aims to resolve the challenges of single hour hands-on lectures and has resulted in significant consolidation of the programme, with some themes that previously had standalone sessions – such as geocoding – now consolidated into a larger umbrella topic.

The provisional titles of the 2016-17 digital skills lectures are in Appendix II. As in 2015-16, the programme will begin with lectures introducing the key concepts that frame historical practice: why History matters, what historians do, and how historians work with sources of past phenomena. It moves on to how historians find those sources in libraries and archives. Week 5 will be the first of the new multi-part lectures: 'History on the Web' looks at the relationship between Historical research and the World Wide Web, first on consuming and second on creating. The series then moves on to referencing essays and bibliographic management tools, to finally consider the role of counting in Historical research, with 'Counting History' split between lectures on quantitative theory and method in History and practice with counting words in texts. The Spring programme will begin with the lecture on Digital History previously offered towards the start of the Autumn term. This lecture – on how digital sources, the World Wide Web, and computational approaches can change the role of History and the historian – now functions as a pivot point between lectures on History skills in the Autumn term to Digital History skills in the Spring term. Thereafter, the programme includes a lecture on the properties of historical data before moving on to two three-part lectures. The first – 'Making historical data' – will include lectures on how digital sources are made, on how historians can use computational tools to assemble collection of historical data, and on cleaning and navigating that data once it is assembled, the latter two of which are hands-on. The second – 'Visualising historical data' – will begin with theory and method around visualising data before moving onto two practical sessions on data visualisation and geocoding/georeferencing respectively. The series will conclude with lectures on Year 2 and Year 3 option modules that include Digital History, on digital preservation, and on sharing, the latter of which introduces students to how licensing and copyright shape the work on historians. As the lectures will be integrated within both History and Art History modules, close attention will be paid to examples and insights that illuminate to students the rich connections between both disciplines.

These improvement will go some way to addressing problems with the 2015-16 series. Looking further ahead, we hope in the future to more closely integrate the Digital Skills lectures with assessment. This will both ensure that Year 1 students

see Digital History as part of rather than an adjunct to History and embed learning within assessment patterns and seminar work. In order to ensure that the novelty of these lectures compared to school level History does not further complicate the Year 1 offer, we will recommend that assessment compliments existing formative assessments in both History and Art History core modules. As these assessments will likely take alternative forms – reflexive essays, reviews of Digital History projects, or public history work – we will pay close attention to ensuring that assessment design is inclusive. As the Higher Education Academy writes:

Adopting new forms of assessment in History, Classics and Archaeology can also raise significant anxiety for students even when they are well supported. Building students' confidence and enabling them to test out alternative forms of assessment at a formative stage so that students can benefit from feedback may mediate some of this anxiety.²⁵

Building students' confidence is at the heart of the Digital Skills lectures. For Digital History to grow and flourish as an integrated part of the Historical profession, we need students who emerge from their undergraduate History degrees confident in their ability to deploy, develop, and critique digital and computational approaches to historical phenomena. Our efforts to foster Digital History by building digital and computational research skills into the Year 1 BA History degree programme at the University of Sussex draw on best practice but also break new ground. Whether or not our students are aware, it makes their undergraduate programme distinctive in the UK context. (V4) By sharing our rationale behind these lectures, how we planned and delivered them, what we did, and what we'd like to improve, we hope that our programme's focus on Digital History won't be so distinctive for much longer.

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²⁵ Higher Education Academy, 'History, Classics and Archaeology: Inclusive Curriculum Design in Higher Education', 3.

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Appendix I

Skills and Digital Skills Lectures, 2015/16²⁶

1. WHAT IS HISTORY?

This lecture forms an introduction to the study of history in its broadest sense, asking what roles academic history writing and a degree in history, serve in modern society. It also locates the study of history within a longer historical tradition; and describes the ways in which politically engaged histories have been used as part of a wider politics. Additionally, it explores the relationship between 'academic' history, and 'public' history.

Questions to consider:

- (a) How do you claim authority in written history?
- (b) What roles does history writing and research have in modern social and political debate?

Reading: Tosh, 'Uses of History'

2. DIGITAL HISTORY

'Digital history' is a term that embraces a wide range of attitudes and practices. It refers generally to the digital provision, initially on CD-ROM but now almost wholly online, of primary sources, articles, books and other forms of historical communication. Increasingly these are 'born digital', that is, they are created exclusively on or for the Web, and they are not digital versions of items previously created or published in print. I examine a number of aspects of the revolution in the production and consumption of history. I argue that digital history is not merely conventional history made available online, but that it offers democratic, improved and entirely new ways of creating new historical sources, assessing and discussing historical issues, and more generally, of doing historical research. I also look at the potential downside of this revolution, namely the loss of the material culture of knowledge and also of certain skills of reading and interpretation. Many of the most important resources are available through the Sussex Library site. This gives access to online resources and online journals, though there are a number of world class, freely available sites such as The Newton Project and OldBaileyOnline.

Questions for discussion might be:

- 1. In what ways is 'doing' Digital History different from practising conventional history?
- 2. How does the publication of online research change traditional relationships with non-academic audiences?

²⁶ Copied from StudyDirect May 2016.

3. Do the gains made possible by the provision of different sorts of digital research outweigh apparent losses in terms of acquaintance with material, printed books, or direct personal contact with supervisors and other students?

Reading:

The [introduction](#) to Dougherty and Nawrotzki, 'Writing history'. You can browse through parts of the online version and note that this is non-linear reading, i.e. you are expected to follow up some but not all embedded links. For further reading see the [section on Wikipedia and how digitisation has changed the writing of history](#); the [conclusion](#) and especially the [afterthoughts](#) at the end of the work.

3. READING HISTORY

This lecture explores how we read history, and how the form of academic history writing is constructed to balance evidence and argument. By describing how articles and books are normally organised and structured, it is designed to encourage you to develop the expertise you need to use academic history texts more instrumentally - taking what you need from them. By first exploring how we read - immersively, skim reading, online, etc - and then unpicking examples of individual articles and books, this lecture seeks to enable you to be a more effective researcher.

Reading: *Both of* Appleby et al, 'Telling the truth about history' and Evans, 'In Defence of History'

4. ZOTERO AND CITATION

When you use a library catalogue to search for secondary material for an essay on, say, Matteo Ricci's activities in China, the library systems you use guide you via metadata about books and articles, information such as their titles, dates of publication, authors. Once you come to read these articles and books, you'll likely take written or typed notes on them and store those notes in physical files or digital folders. Later when you come to write your essay, you'll return to these files or folders, find your notes on the articles and books you read, and copy out the metadata that helped you find them as part of the footnotes and bibliographies that support your argument. There is nothing inherently wrong with this process. But what it doesn't do is fully exploit and connect the digital elements involved.

This lecture is not a lecture on citation. Rather, it is a lecture that will empower you to use citations to make your essay preparation and writing more efficient, easier to manage, and better able to make connections between sources. It will introduce you to Zotero, reference management software that enables you to manage bibliographic data and related research materials. It will show you how to capture with one click a reference, often with the publication it refers to attached. It will show you how to auto-

generate bibliographies and footnotes from those references. And it will show you how to manage your notes, comments, and thoughts on the articles and books you read so that they form a simple keyword searchable database you can return to again and again.

No knowledge of Zotero is required. If you want to follow along, please install Zotero in advance: instructions are on the Library webpages <http://www.sussex.ac.uk/library/guides/endnote/zotero> (note, installing Zotero in advance is not compulsory)

Further resources:

Cohen, Daniel J. (2008), 'Creating Scholarly Tools and Resources for the Digital Ecosystem: Building Connections in the Zotero Project', *First Monday* 14:8 <http://dx.doi.org/10.5210/fm.v13i8.2233>

Howard, S. (2014), 'A Zotero Guide' <http://sharonhoward.org/zoterowiki/> (accessed 16 September 2015)

Sussex Library, 'Zotero'

<http://www.sussex.ac.uk/library/guides/endnote/zotero> (accessed 16 September 2015)

Study Direct, 'Zotero module'

<https://studysdirect.sussex.ac.uk/course/view.php?id=13333>

Takats, S. (2011), 'Zotero Versus'

<http://quintessenceofham.org/2011/05/06/zotero-versus/> (accessed 16 September 2015)

Installing Word Processor Plugins for Zotero for Firefox

https://www.zotero.org/support/word_processor_plugin_installation

6. SEARCH SKILLS

We all know how to 'search' online for the things we want; and when searching for historical information - the date The Treaty of Westphalia was signed, or the correct spelling of *Ancien Regime* - most of us now rely on Google. But, we may not be aware of search techniques that can help optimise search results or the background processes that tailor those results based on online activity and history. This lecture will consider some of the complexities inherent in searching the web and will touch on topics such as search techniques, tailoring and manipulation, ranking, and the 'deep web', in order to gain a better understanding how to search and navigate the web effectively for historical research.

Reading:

Cohen, D. (2010) '[Is Google good for history?](#)' (accessed 8 Sept 2015)

Further Resources:

Bruce R., & Jacobs Neil (2013) '[Ten search engines for researchers that go beyond Google](#)' (accessed 8 Sept 2015)

Halavais, A. (2009) 'Search Engine Society. Digital Media and Society Series' (Sussex Library)

Schmidt, Ben (2011) '[What historians don't know about database design](#)' in Sapping Attention (Blog) (accessed 11 Sept 2015)

7. JUDGING A WEB PAGE

All historical research draws upon collections of historical materials available either on the open web or via subscription. It is not always apparent, however, how you should judge what you find. Few clear criteria exist and those criteria can be quickly rendered obsolete by the fluidity of the web. And traditional markers of quality that replicate the decision of a library to purchase a book are not always appropriate.

Nevertheless, the questions of power and authority that historians bring to their interaction with any archive or book can and should be brought to bear on the websites we use. This lecture will use case studies of Wikipedia, Google Books, and Welsh Newspapers Online to explore ways in which you should judge webpages containing collections of historical materials.

Further resources:

National Library of Wales (2014), 'About Welsh Newspapers Online' <http://www.llgc.org.uk/index.php?id=4723> (accessed 16 September 2015)

Nurnberg, Geoff (2009), 'Google Books: A Metadata Train Wreck' <http://languagelog.ldc.upenn.edu/nll/?p=1701> (accessed 16 September 2015)

Postrel, Virginia (2014), 'Who Killed Wikipedia?' <http://www.psmag.com/books-and-culture/killed-wikipedia-93777> (accessed 16 September 2015)

Sussex Library, Online Resources <http://guides.lib.sussex.ac.uk/resources> (accessed 16 September 2015)

Wadewitz, Adrienne (2013), 'Wikipedia is pushing the boundaries of scholarly practice but the gender gap must be addressed', Impact of Social Science, London School of Economics <http://blogs.lse.ac.uk/impactofsocialsciences/2013/04/09/change-the-world-edit-wikipedia/> (accessed 16 September 2015)

8. BLOGS AND TWITTER AS SCHOLARLY AUTHORITIES

Traditionally, historians have used formal publication channels to publish and disseminate their research. Increasingly however, they are turning to blogs and microblogs (Twitter) to supplement and support this activity. These new methods of "publication" allow us, as students of history, to tap into new and often engaging forms of historical writing but can also help us discover new resources for specific subject areas. For example, a Tweet from [@EMhistblog](#) ('Early Modern World') may inform you of new online collections or '[The Early Modern World](#)' blog might provide a list of new resources.

This lecture will consider how you might use blogs and Twitter in your

studies and examine how to judge these sources as either an authoritative public record or an inappropriate one. So that while we encourage you to experiment in the world of blogging and micro-blogging, as a means to interact with current historical debate and other online audiences, it will also prompt you to judge their reliability and accuracy, and question their perceived authority.

Readings:

Hitchcock, T. (2014) '[Doing it in public: Impact, blogging, social media and the academy](#)' (accessed 10 September 2015)

Further Resources:

['How to... use Twitter for academic research'](#) (accessed 9 September 2015)

Charprentier, A. (2014). '[Academic blogging, a personal experience](#)' (accessed 11 September 2015)

Cohen, D. (2011) '[The Ivory Tower and the Open Web: Introduction: Burritos, Browsers, and Books](#) [Draft]' (accessed 11 September 2015)
['Blogging for historians'](#) (accessed 11 Sept. 2015)

9. MAKING A WEB PAGE

Following on from 'Blogs and Twitter as Authorities' (Week 8) this lecture will consider how you might go about making your own web page by using 'out of the box', free, software. It will also give a practical overview of how the web works and a brief introduction to the technologies that control it.

Readings:

Cohen, D.J., & Rosenzweig, R. (2009) 'Designing for the history web' in *Digital History. A guide to gathering, preserving and presenting the past on the web* <http://chnm.gmu.edu/digitalhistory/designing/> (accessed 11 Sept. 2015)

Further Resources:

w3schools (on-line tutorials in web technologies/languages):
<http://www.w3schools.com/> (accessed 11 Sept. 2015)

Code Academy: Make a Website:

<https://www.codecademy.com/skills/make-a-website> (accessed 11 Sept. 2015)

Wordpress: <https://wordpress.com/> (accessed 11 Sept. 2015)

Tumblr: <https://www.tumblr.com/> (accessed 11 Sept. 2015)

Weebly: <http://www.weebly.com/> (accessed 11 Sept. 2015)

Drupal: <https://www.drupal.org/> (accessed 11 Sept. 2015)

10. IMAGES

Images play a prominent role in the arguments historians make. The web has made it easier than ever for you to find, inspect, and store reproductions of historical objects whose originals are held in galleries, archives or museums from across the world. However, when our online search returns images of,

say, early modern poverty, we need to pause and ask some question: what is it that we have actually found? Who is it that chose to make these images available? What is missing from our search results? And what is the relationship between our search criteria and the objects our research results represent?

This lecture will introduce you to a number of major image repositories, it will suggest strategies for searching for images, and it will help you make better sense of the images you find. It will also suggest ways in which you can give something back by contributing to the wealth of historical images online, in the process of which gaining a richer sense of how best to use them in your own work.

Reading:

Benjamin, W. (1936) 'The work of Art in the Age of Mechanical Reproduction' <https://www.marxists.org/reference/subject/philosophy/works/ge/benjamin.htm>

Jordanova, L. (2008) 'Image Matters', The Historical Journal 51:3
<http://dx.doi.org/10.1017/S0018246X08007024>

Further resources:

British Cartoon Archive <https://www.cartoons.ac.uk/> (accessed 16 September 2015)

British Museum Collection Online
http://www.britishmuseum.org/research/collection_online/search.aspx
(accessed 16 September 2015)

Burke, P. (2001) Eyewitnessing : the uses of images as historical evidence
Flickr Commons <https://www.flickr.com/commons> (accessed 16 September 2015)

Hilary Davidson (2015) Free Academic Images
<https://academicimages.wordpress.com/> (accessed 16 September 2015)

Wikimedia Commons https://commons.wikimedia.org/wiki/Main_Page
(accessed 16 September 2015)

11. NGRAMS, VOYANT, CORPUS

This lecture will introduce you to a number of text analysis tools and methods and will consider how visualization techniques and text analysis can be used as a method to support historical research. We will consider how data visualization techniques can help us to interrogate the millions of digitised books and texts now available to us and see whether or not experiments using Google's Ngram Viewer and the text analysis software Voyant can be useful in helping to explain or detect certain historical patterns of phenomena. By carrying out in class experiments we will discuss whether or not we can extrapolate any useful patterns about global trade as presented in Google Books corpus of digitized text and consider what a text analysis, using Voyant, of Cook's Diary may or may not reveal. However,

while these tools and techniques can help reveal patterns and trends within texts, we will examine how historical context, interpretation and critical engagement with the results of these techniques, or "evidence" presented by these tools, is still required and an important aspect of text or corpus analysis.

Reading:

Zimmer, B (2013) 'Google's Ngram Viewer Goes Wild' in The Atlantic
<http://www.theatlantic.com/technology/archive/2013/10/googles-ngram-viewer-goes-wild/280601/> (accessed 15 Sept. 2015)

Information is Beautiful. Ideas, issues, knowledge, data - visualized:
<http://www.informationisbeautiful.net/visualizations/google-ngram-experiments/> (accessed 11 Sept. 2015)

Michel, et al (2011) 'Qualitative Analysis of Culture Using Millions of Digitized Books' : <http://www.sciencemag.org/content/331/6014/176.full> (accessed 9 Dec. 2015)

Additional Reading (as mentioned in class):

Aiden, E., & Michel, J. (2013) 'Uncharted: Big Data as a Lens on Human Culture'

Further Resources:

Dirt: Digital Research Tools: <http://dirtdirectory.org/> (accessed 11 Sept. 2015)

Ngrams: <https://books.google.com/ngrams/info>

Voyant: <http://voyant-tools.org/>

Additional tools as mentioned in class - listed on power point.

12. WHAT MAKES GOOD ~~digital~~ HISTORY?

"We've spent millions digitizing the world's historical resources. Let's work together to figure out what they can teach us" – Adam Crymble

Digital History is historical work made possible by the use of computational tools to manipulate electronic resources in ways that go beyond everyday activities such as looking at those resources in a web browser, storing them on a computer, or writing about them in a word processor. This lecture begins by reviewing the key messages from the digital skills lectures in the Autumn term. It will then outline the topics that will be covered during the digital skills lectures this term. For the bulk of the lecture, however, we will introduce digital history projects that are exemplars of good practice: that are open, collaborative, rigorous, driven by intellectual concerns, and - most importantly - change our understanding of past phenomena.

13 MAKING A HISTORICAL WEBSITE: THE OLD BAILEY ONLINE – FROM NOSE TO TALE.

This lecture explores the ways in which older systems of publication, such as microfilm, have determined what sources and materials are available online. It argues that 'history' as found on the internet is fundamentally shaped by

early and mid-twentieth century perspectives. The lectures explores this topic through a detailed analysis of the impact that both older technologies, and XML had in the creation of the *Old Bailey Online* (www.oldbaileyonline.org).

14. DIGITAL LIBRARY SKILLS

Whether using Library Search to locate print items held in the Library, exploring our electronic databases or searching the web, digital skills play an essential part in successful literature searching. This in turn is vital to the research you will need to carry out for this module. The Digital Library Skills lecture will introduce you to the skills needed for effective literature searching with particular reference to the assessments for this module. In the session you will learn how to:

- Improve your search strategies to find the most relevant materials for your essay
- Search the Library's print and digital resources including full-text journal articles, ebooks and the specific key readings needed for your assignment
- Locate the high-quality secondary sources that can be found in the academic databases of your subject guide
- Critically evaluate the resources that you find to ensure that they are appropriate for your work
- Get help with referencing and creating a bibliography

Before the session you will need to complete the short [Planning a search](#) and [Finding resources](#) quizzes on [infoSuss](#), the Library's online tutorial on Study Direct.

15. DIGITAL PRESERVATION

Historical research relies upon primary source material. These sources (letters, manuscripts, ledgers, journals, photographs, newspaper articles, diaries, prints, posters, maps, etc.) are remnants of the past which often exist today because of the physical characteristics of the material with which they were made. For example vellum or parchments, made from animal skin, as well as papyrus, can last hundreds, if not thousands of years (e.g. Book of Kells, Magna Carta, Faddan More Psalter). However, this "longevity" is certainly not the case for all material; paper made with wood pulp deteriorates a lot quicker than one might expect. (But, we must also not ignore the enormous conservation efforts carried out within archives, museums and other cultural institutions on a daily basis).

As we move into the digital age of historical research, historians rely more and more on digitised and born digital (re)sources which "last forever...or five years, whichever comes first". This lecture will consider the fragile nature of our digital record and looks at how our digital record is in danger of extinction. It will look at a number of digital preservation methods or

strategies and look at some case studies that will help us as historians understand this complex, but important, issue.

Reading:

Digital Repository of Ireland (2014), 'Long-term digital preservation', available at

<http://www.dri.ie/sites/default/files/file/Fact%20Sheet%20No%204%20Long%20term%20digital%20preservation%20ver%201.pdf>

O'Carroll, A., & Webb, S. (2012), 'Digital Preservation: Sustainable Access' in Digital Archiving in Ireland, pp. 18-26, available at <http://dri.ie/digital-archiving-in-ireland-2012.pdf>

Further Reading:

Roy Rosenzweig, 'Scarcity or Abundance? Preserving the Past in a Digital Era' in *American Historical Review* 108, 3 (June 2003): 735-62 also available <https://chnm.gmu.edu/digitalhistory/links/pdf/introduction/0.6b.pdf>

16. FLIPPING THE ARCHIVE

This session will introduce you to the archives at the University of Sussex Special Collections and The Keep, including the Mass Observation Archive. It will also provide valuable information about how to use archive materials to support your studies. If you haven't used archives before, it may seem a little daunting. You might be thinking along the lines of: *How can I use this material? Is this relevant? Where do I start?* Using original manuscripts, texts, images and ephemera can provide you with rich material for your assignments and help you to think about your topic in different and illuminating ways. In this session you will learn how to:

- Access The Keep and undertake research using various archival collections
- Develop your ability to research a range of topics using printed and digital resources
- Search The Keep's online catalogue to locate archive materials relevant to your studies
- Use MO online and other digital resources such as Observing 1980's
- Get help with referencing and using archives in your assignments

Special Collections holds over 100 archival, manuscript and rare book collections, mostly relating to 20th and 21st century literary, political and social history. In late 2013, Special Collections moved from the Library to a new building, The Keep, a short walk from campus. This session is designed to give you the knowledge and confidence to come over to The Keep and start using our collections before your final year.

Before the session you will need to:

- Register online to access The Keep <http://www.thekeep.info>
- Subscribe to Special Collections at The Keep Archives on Study Direct <https://studysdirect.sussex.ac.uk>
- View <http://www.massobservation.amdigital.co.uk>

- View <http://www.massobs.org.uk>
- Read <http://www.bbc.co.uk/news/magazine-24957664>

17. DATA AND THE PAST

Our libraries are now places full of data as much as they are places full of books. For example, in January 2015 Europeana Newspapers aggregated 18 million digitised newspaper pages through a single search interface. Twenty nineteenth-century European languages are represented here, the use of which can - no doubt - be studied in order to enrich our understanding of nineteenth-century nationalism. 18 million pages is, however, more information than historians can read, digest, and meaningfully digest in their lifetimes, and so this lecture will describe how that data is constructed in ways that help historians of nineteenth century Europe turn to methods aided by computers to help them read and in turn understand the vast quantities of 'data' produced during this century.

The lecture will conclude by - briefly - moving forwards to the late-twentieth century. Compared with the vast volumes of word processed documents, multimedia files, and web pages produced since the dawn of the Information Age, 18 million pages is not only tiny but also relatively straightforward to capture, preserve, and process. It will describe some of these archives and their difference in character to digitised records. And it will ask whether given the deluge of born-digital data created since the 1990s historians will be able to meaningfully interpret the modern world without methods aided by computers?.

18. GEOCODING AND MAPPING HISTORICAL DATA

NOTE: if you want to follow along in the lecture please bring a laptop (or work with a friend; not a tablet/phone) on which you have a) an internet connection and b) downloaded and extracted the data below (MMW-wk8-data.zip) in advance. There is no disadvantage to you if you can't do this as I will demo everything on the screen.... Mapping historical information is an established way of interpreting the spatial complexity of past phenomena. Machines are ideally suited to this task, enabling the historians to geocode places of interest and query the mapped results. In this session, I will demo the use of [BatchGeo](#) to geocode and map historical data. We will examine the mapped data, consider the validity of the results, and explore what the historian needs to make best use of these technologies.

Links and further reading:

batchgeo (batchgeo.com)

Dave Cole, 'Mapping a Google Docs Spreadsheet,' MapBox Blog, 12 October 2011 <https://www.mapbox.com/blog/mapping-google-doc-spreadsheet>
GetLatLon (dbsgeo.com/latlon)

Steven Jones, *The Emergence of the Digital Humanities* (London: Routledge, 2013)

Locating London's Past (locatinglondon.org, version 1.0, 17 December 2011)
Political Meetings Mapper (politicalmeetingsmapper.co.uk, 2015)
Katrina Navickas, 'Why I am tired of turning: a theoretical interlude', History Working Papers (2011)
http://www.historyworkingpapers.org/?page_id=225
Miriam Posner, 'Money and Time', Miriam Posner's Blog, 14 March 2016
<http://miriamposner.com/blog/money-and-time/>
TileMill (mapbox.com/tilemill)

19. REFERENCING AND ESSAY WRITING

Jim Endersby will explain why proper referencing is vital, explain digital tools to make it easier, and show you that it's the key to writing better essays.

20. MAKING RAW DATA YOUR DATA

NOTE: if you want to follow along in the lecture please bring a laptop (or work with a friend; not a tablet/phone) on which you have in advance a) downloaded the data below ([MMW-wk10-BLMSbook-list-subset.csv](#)), b) downloaded and installed OpenRefine 2.6 (see instructions at <http://openrefine.org/download.html>) and c) run OpenRefine (see instructions at <https://github.com/OpenRefine/OpenRefine/wiki/Installation-Instructions>) and point to <http://127.0.0.1:3333/> in your web browser (not Internet Explorer) to check it is working. ANY problems email me at james.baker@sussex.ac.uk. As with the mapping lecture, there is no disadvantage to you if you can't do this as I will demo everything on the screen.... In order to make historical information machine readable, historians often need to change the 'raw' information they find in the archive. The process of cleaning historical information is, however, never neutral, requiring the historian to make critically informed decisions that are part of the process of understanding the past they care about. As a means of working through these dynamics, this interactive lecture will be introduce you to the data clean-up tool OpenRefine

21. DATA VISUALISATION

Data visualisations help us to interpret and evaluate raw data which in their natural form are often difficult to understand. They help us to observe, identify and critique patterns and trends that would otherwise remain hidden, and can be a powerful form of communication in a world often dominated by linear (hyper)text. This lecture will introduce you to the idea of data visualization and demonstrate, using the raw data sets created in previous lectures, how you might use some basic, off the shelf, visualisation tools. It will also encourage you to judge, critique and evaluate data visualisations, so that we ask not just are they "pretty" but are they useful.

Resources:

Visual Complexity: <http://www.visualcomplexity.com/vc/>

Hans Rosling, 'The Best Stats You've Ever Seen':
<https://www.youtube.com/watch?v=usdJgEwMinM>
Example tools include: [Gephi](#), [NodeXL](#), [ManyEyes](#), [Google Fusion Tables](#),
[TAPoR 2.0](#), [RoSE](#), [ImagePlot](#)

Appendix II

Digital Skills 2016/17 (provisional)²⁷

Autumn

1. What is History / What is Art History
2. Reading History / Reading Art History
3. Library
4. Archives
5. History on the Web I: finding
6. Referencing (ART HISTORY READING WEEK)
7. Art History on the Web (HISTORY READING WEEK)
8. History on the Web II: sharing and being
9. Zotero
10. Counting History I: theory
11. Counting History II: practice
12. NO LECTURE

Spring

1. What is Digital History? And what is good Digital History?
2. Data about the Past
3. Making historical data I: theory
4. Making historical data II: getting
5. Making historical data III: cleaning
6. Visualising historical data I: theory

²⁷ Prepared July 2016.

7. Visualising historical data II: practice (data visualization)
8. Visualising historical data III: practice (geocoding/mapping)
9. Doing digital history in Y2, Y3 and beyond (ART HISTORY READING WEEK)
10. Storing and preserving historical data
11. Sharing historical data
12. ASSESSMENT WEEK