Oral History and the Hidden Histories project: towards histories of computing in the humanities

Julianne Nyhan
Department of Information Studies, University College London, UK

Andrew Flinn
Department of Information Studies, University College London, UK

Anne Welsh
Department of Information Studies, University College London, UK

Abstract

This article demonstrates that the history of computing in the humanities is an almost uncharted research topic. It argues that this oversight must be remedied as a matter of urgency so that the evolutionary model of progress that currently dominates the field can be countered. We describe the 'Hidden Histories' pilot project and explore the origins and practice of oral history; in the corresponding issue of *Digital Humanities Quarterly*, five oral history interviews that we carried out during the project are presented. We conclude that the selection of interviews presented here demonstrate that oral history is an important and productive methodology in such research. The five oral history interviews form primary sources, which can be used in the writing of a history of computing in the humanities; furthermore, they contain new information and interpretations, which cannot be gleaned from published scholarly articles, for example, information about the varied entry routes into the field that have existed and the interrelationship between myth and history in the narratives we create about the emergence of digital humanities.

Correspondence:
Julianne Nyhan, Department of Information Studies, University College London, London, UK.
Email: j.nyhan@ucl.ac.uk

1 Introduction, or, why do we need a history of computing in the humanities?

Harbingers of the advances that computing has long promised to bestow on the humanities have often used the word 'revolutionary'. A simple Google search (carried out on 17/07/2012) for '"digital humanities" AND revolution*' results in some 362,000 hits. Among them, both article titles and articles containing such words abound, from 'The Digital Humanities Revolution' (Mattison, 2006) to the 'Digital Humanities Manifesto 2.0' (Presner *et al.*, 2009) and on to more critical work such as Matt

Gold's 'Whose revolution? Towards a more equitable Digital Humanities' (2012). Indeed, as Ess has reflected, 'Computing technologies—like other technological innovations in the modern West—are inevitably introduced with the rhetoric of "revolution"' (2004, p. 132). Irrespective of whether the aims of a given revolution are achieved or not, revolutions invariably entail varying degrees of destruction. For example, an astonishing event at a project in the US patent office, whose remit it was to produce digital editions of 18th- and 19th-century patent documents, reveals the fervour with which the process of digitization was embraced by some. When a member of the public recovered four original patent applications by Thomas Edison from a skip outside the office, it emerged that the original documents had being digitized, and then disposed of (Warner and Buschman, 2004). Needless to say, digital technology is not unusual in this regard and many other examples from various times and places can be proffered, for example, the alleged destruction of original historical newspapers by the Library of Congress and other libraries in the USA once they had been microfilmed (Baker, 1994; Cox, 2001). Indeed, the term revolution usually implies a violent struggle to overthrow all that went before, and to some extent, the implication that the resultant present (and expected future) is somehow 'better' than the outmoded, and perhaps, corrupt past. Why, then, does a subject like digital humanities, which has its finger on the pulse of the *zeitgeist* and—one might reasonably conclude from an overview of some sections of the literature of the field—is supposedly in a state of permanent revolution need to study and build knowledge about its past?

And what of the notion of History itself? A multitude of verdicts have been passed on History and its purposes. Polybius held history to be 'the best instruction for the regulation of good conduct of modern life', R.G. Collingwood stated that 'the value of history, then, is that it teaches us what man has done and thus what man is' (1946 [1986], p. 10), while George Macaulay Trevelyan cautioned that it is the 'black night of the utterly forgotten' (1930, p. 144). In relation to the history of computing in the humanities, and particularly with reference to the current state of the art, it is important to ask what the purpose of such a history might be and why a history, or histories, might even be needed?

Digital humanities may certainly be *de jour*, yet its origins are usually traced back to 1949, when Fr Roberto Busa began work on an *index variorum* of some 11 million words of medieval Latin in the works of St Thomas Aquinas and related authors (Hockey, 2004). Notwithstanding this comparative longevity, we can reasonably describe as impoverished our understanding of the intervening history, whether it relates to humanities computing or digital humanities, or indeed a stand whose interrelationship with these fields remains unclear: that of the non-specialist incorporation of the computer into various aspects of traditional humanities scholars' work. From our present-day vantage point, it seems obvious that the intersection of computing—and we use computing in the broadest possible sense to avoid the implication of either technical or social determinism or that it can be done with 'the computer' only—and humanities research is altering not only the scope and possibilities of humanities research (see, for example, Bulger *et al.*, 2011) but also some of the conditions under which it is carried out (see, for example, Moulin *et al.*, 2011). Social and cultural shifts within the Academy can be noticed (see, for example, Deegan and McCarty, 2012; McGann, 2010; and the work of the #acl-ac movement), as can the stirrings of some philosophical and intellectual changes, for example, William Turkel has written 'Just because the separation between thinking and making is long-standing and well-entrenched doesn't make it a good idea. At various times in the past, humanists have been deeply involved in making stuff: Archimedes, the Banu Musa brothers, da Vinci, Vaucanson, the Lunar Men, Bauhaus, W. Grey Walter, Gordon Mumma. The list could easily be multiplied into every time and place...' (2008).

Yet, we have but a limited understanding of how and why it is that we got to where we are now, of the intellectual, cultural, and technical *hintergrund* of such changes and their comparative historical context. Indeed, without a better understanding—a more appropriate term might be 'body of interpretations'—of the near and distant history of

computing in the humanities, we are condemned to repeat the revolutionary trope *ad infinitum*. And the intellectually limiting results of this are not merely rhetorical: scholars such as Zielinski (2006) have emphatically demonstrated the inadequateness of the evolutionary model of progress that is implicit in such revolutionary pronouncements. In the words of Druckery:

> Ingrained in this model is a flawed notion of the survivability of the fittest, the slow assimilation of the most efficient mutation, the perfectibility of the unadapted, and perhaps, a reactionary avant-gardism. In this model there is less failure than dopey momentum and fewer ruptures than can be easily accounted for. As historiography it provides an orthodox itinerary uncluttered by speculation or dissent, unfettered by difference, disconnected from the archive, averse to heterogenity. (2006, p. vii–viii).

Below, we will argue why we believe that oral history is an especially suitable methodology for seeking to expose, rather than gloss over the heterogeneity, dissent, and difference that is an integral part of human existence (to say nothing of the work of historians) and why we made it a central pillar of the 'Hidden Histories' pilot project described here.

Returning, then, to the purpose of history, Arthur Marwick has written 'As memory is to the individual, so history is to the community or society. . . . It is only through a sense of history that communities establish their identity, orientate themselves, understand their relationship to the past and to other communities and societies'(1989, p. 14). This point seems especially pertinent in relation to digital humanities and the wider history of computing in the humanities. Without understanding its history and comparative context better how can digital humanities begin to identify and forge connections with disciplines such as, *inter alia*, digital anthropology and information studies that may offer insights into solving some of what we might call the 'grand challenges' that it is currently facing, for example, the field's lack of involvement with cultural criticism (Liu, 2012). As McCarty has argued 'For computing to be *of* the humanities as well as *in* them, we must get beyond catalogues,

chronologies, and heroic firsts to a genuine history. There are none yet.' (2008, p. 255).

2 The state of the art

Contributions and notes towards a history of the field of digital humanities have been appearing since at least 1991 (Adamo, 1994; Fraser, 1996; Hockey, 2004; McCarty, 2003; Raben, 1991). The most substantial contribution published to date, that of Hockey, is a chronological account that emphasizes 'landmarks where significant intellectual progress has been made or where work done within humanities computing has been adopted, developed or drawn on substantially within other disciplines' (2004, p. 3). As welcome and important as such contributions are they neither are nor aim to be comprehensive histories of the field. More recent and ongoing research is enabling us to fill aspects of the broad outlines of such a history. Barnet (2008; 2010) has published two excellent articles on the evolution of the Memex and the hypertext editing systems HES and FRESS; Rockwell *et al.* (2011) have researched the incunabular history of computing in Canada and are furthermore undertaking oral history research into the history of digital humanities in Canada. Willard McCarty (see http://www.mccarty. org.uk/) is at work on a history of literary computing from c.1949 to 1991. Edward Vanhoutte has published on (2010) and is at work on the history of electronic scholarly editing (see http://www. edwardvanhoutte.org/onderzoek/index.htm).

To the best of our knowledge, oral history-led research on the history of computing in the humanities has not been undertaken until this project; yet, relevant work in allied fields is ongoing, for example, the Association for Computing Machinery (ACM) History Committee and their oral history interviews as well as the oral history collection of the Charles Babbage institute. In 1996, Mahoney, in his consideration of the history of computing within the history of technology has argued that 'At present, the evolution of computing as a system and of its interfaces with other systems of thought and action has yet to be traced' (1996). From the perspective of computing in the Humanities, the situation is little changed.

2.1 The relative neglect of the history of computing in the humanities

Laue has argued that 'The computer was built to be a sophisticated device for the manipulation of symbols, and, at several levels, it is just that. But this description does not acknowledge that computers are also symbols, nor does it reveal the extent to which computers employ technologies symbolic of larger historical and cultural trends' (2004, p. 145). The factors that are likely to have contributed to the relative neglect of the history of computing in the humanities are multifaceted and somewhat difficult to substantiate. Nevertheless, the importance of reflecting on why the area is under-researched is emphasized by considering that it has not been neglected by the humanities, science, and technology communities only, but by the digital humanities community too, with the exception of the examples outlined above. The reasons for this seem to include methodological difficulties as well as social and intellectual ones; space will allow us to mention an exemplary few.

One important factor seems to be the range of conflicting attitudes to the computer and its place in humanities research that have existed, and, perhaps in turn, an implicit judgement about which topics are worthy of historical study. At one end of the spectrum we can notice the detrimental effect of the revolutionary terms in which computing is described and advertised, as Mahoney put it '...[C]omputers and computing...have always been surrounded by hype (it was—and may still be—the only way to sell them), but hype hides history...' (2005, p. 120). At the other end is the retort that the computer is 'just a tool' (see, for example, Humanist Discussion Group 'tools and mascots' 15.489, 2002), already prevalent enough by 1962 for Margaret Masterman to argue that the computer was far more than a 'menial tool' (1962). Relevant too must be fear of the computer, and the contexts that it emanated from, such as the Cold War, as has been discussed by McCarty (2011). When present-day manifestations of such fears, for example, the Singularity, are considered in a historical context, it is difficult not to connect them with a much older and more fundamental fear that has been attested

since prehistoric times (Lisboa, 2011)—that of the end of the world.

The selection of oral history interviews included here contain material that is relevant to this issue too and that highlight the wide range of reactions, both within and outside academia, towards the computer that have existed. Ray Siemens has discussed the lingering suspicion that the computer was just another fad. Despite the prescience that his father showed in matters relating to computers, Siemens relates that his father's joke in the last part of his academic career was the hope that he could 'ride out this computer fad' (Siemens *et al.* 2012). For sure, this must have been meant in an ironic way; yet, it would not have been funny were there not at least a grain of suspicion involved. Harold Short relates that a sizeable portion of the traditional humanities community that he and his colleagues encountered simply did not understand a great deal about computing, 'a lot of it came down, as always, to interpersonal relationships and we had the experience over and over again of working with a scholar who simply at the outset didn't understand what the potential might be' (Short *et al.*, 2012). This observation intersects, to some extent, with that of McCarty who spoke in his interview of 'The coolness of the reception is what I felt from the people that weren't using computers'. So too, he goes on to observe 'There's very little in the professional literature to clue you into how frightening computers were to the population in general. You have to do a lot of historical digging to bring that out' (McCarty *et al.*, 2012). Geoffrey Rockwell also discusses the wide range of attitudes towards the computer and its role in research that he has encountered, from comments from other faculty members along the lines that they did not understand why '...we are running computing classes, this is like Pencils in the Humanities', on to another version of the fear of computing that has existed 'I distinctly got the feeling that there was a class of people for whom this was seen as a Trojan horse. The Humanities were under attack, people felt that back then and, you know, and now the Humanities were not even the Humanities' as well as the judgement that 'you guys are intellectually lightweight' in addition to

'blatant sarcasm and ignorance'. (Rockwell *et al.*, 2012)

Numerous other practical and intellectual difficulties beset the writing of such a history. Hockey has reflected on the inherent difficulties of scope when attempting to write the history of an interdisciplinary field (2004). Another difficulty is the apparent paucity of sources that are available and their sometimes limited accessibility. McCarty, in his overview of the Corpus of Electronic Text (CELT) Project, University College Cork noted that '. . . even the basic facts are rather difficult to recover' and in a note thanks two members of the project for 'much of the historical information included here' (McCarty, 2013). The CELT project was set up by Professor Donnchadh Ó Corráin and emanated from a project also set up by him in November 1991. It was one of the earliest, if not the earliest, digital humanities project to be set up in Ireland and preceded the Digital Humanities Observatory by some 15 years. From its inception, it encoded historical texts of medieval and modern Ireland in line with TEI, and the first PhD thesis on TEI was carried out there in 1997 (Cournane, 1997). It also played a key role in now defunct projects such as the 'Documents of Ireland' project of University College Cork, which ended in 1999 and included some nine projects ranging from 'Breaking the Silence—Voicing the Experience of Staying-at-home in an Emigrant Society' to 'The Latin Bible: Text and Reception'. Despite the historical significance of CELT and the influence it had on the shape that digital humanities in Ireland has taken, or not taken, one must conclude from McCarty's article that much of the relevant documentation pertaining to the setting up of the CELT project was either not preserved or is not accessible. Furthermore, the testimonies from members of the project that he has relied on for historical detail are not independently accessible for scrutiny. Given the significance of the CELT project it is astonishing to note that the most basic preconditions of a history of it: the existence of primary documents and the ability to independently consult such documentation, appear to be absent.

One cannot generalize from one project to the whole of digital humanities, or from one era to another; however, anecdotally it seems clear that this is an issue that afflicts many digital humanities projects. Going forward as a discipline we must become more historically aware and mindful of the documentation and reflections that should be recorded and preserved. It was especially in this context that this project sought to carry out oral history interviews to collect and make available important primary sources for the writing of such a history.

3 An Overview of the Hidden Histories Project

The project entitled 'Hidden Histories: Computing and the Humanities c.1949–1980' was a pilot project undertaken thanks to seed funding of 5000 euro from the University of Trier's *Historisch-Kulturwissenschaftliche Forschungszentrum* and with assistance from the UCL Centre for Digital Humanities. It aimed to gather and make available sources to enable the social, intellectual, and cultural conditions that shaped the early take up of computing in the humanities to be investigated. A key aim of the pilot was to investigate the appropriateness of oral history as a methodology for capturing memories, observations, and insights that are rarely recorded in the scholarly literature of the field. Accordingly, we carried out a number of pilot interviews to test our methodology and aims. Though outside the scope of this article, another important aspect of our pilot project was the bibliographical research we undertook to identify a list of scholars active in the area of computing in the humanities since the 1960s.

3.1 On terminology and boundaries

A key problem for this project was the setting of boundaries and defining whether our project should focus on digital humanities exclusively or on the history of computing in the humanities in general. Digital humanists may identify themselves as being in a different tribe to humanities scholars who use the computer in their research in a non-specialist way, yet, the latter may be easier to identify than the former.

Over the past years, the field that we now refer to as digital humanities has been known by many terms: humanities computing, humanist informatics, literary and linguistic computing, and digital resources in the humanities, to name but a few. Most recently it is predominately known as digital humanities, though other variations such as eHumanities are occasionally to be found in literature emanating from continental Europe (see Neuroth *et al.*, 2009). Matthew G. Kirschenbaum has noted that 'the rapid and remarkable rise of digital humanities as a term can be traced to a set of surprisingly specific circumstances' (2010, p. 2). These he identifies as the 2005 publication of Blackwell's *Companion to Digital Humanities*, the name that was chosen at the end of 2005 for the organization that arose out of the amalgamation of the Association for Computers in the Humanities and the Association for Literary and Linguistic Computing (that is the Alliance of Digital Humanities Organizations), and the 2006 launch of the National Endowment for the Humanities' digital humanities programme (Kirschenbaum, 2010, p. 3). Although digital humanities has had its 'own' journals since *Computers and the Humanities* was first published in 1966, it is clear that one important effect of the rise of the term 'digital humanities' is the practicality of enabling scholars to self-identify as digital humanities scholars. It seems likely that the increasing currency of the term digital humanities will play an important role in helping to consolidate the community and its frame of reference; nevertheless, what it is that the term refers to is a vigorously contested topic. Furthermore, a number of scholars (for example, Rockwell, 2011; Svensson, 2009; Terras, 2011; Unsworth, 2010) have reflected on issues of inclusion and exclusion in digital humanities. According to Rockwell 'We are a point of disciplinary evolution that calls for reflection, grace, and a renewed commitment to inclusion. Above all we need to critically review our history and our narrative of exclusion and inclusion lest it blind us to needs of the next generation' (Rockwell, 2011).

Looking at the numerous blogs that have recently been published on this topic one might reasonably conclude that the debate over what digital humanities is and is not is a rather recent one; it is not.

Much of the writings that were published between 1980 and 2000 focused on defining the field in terms of how it might be taught. Terras (2006, pp. 230–31) has given a comprehensive overview of relevant literature from this educational perspective. For example, between 1996 and 2000, a consortium of European Universities participated in a project called 'Advanced Computing in the Humanities (ACO*HUM)'. The book that resulted from the network explores how digital humanities might be taught, thus implicitly exploring what it was then considered to be:

> Computer technology has mediated in the development of formal methods in humanities scholarship. Such methods are often much more powerful than traditional research with pencil and paper. They include, for instance, parsing techniques in computational linguistics, the calculus for expressive timing in music, the use of exploratory statistics in formal stylistics, visual search in art history, and data mining in history. Although scientific progress is in the first place due to better methods, rather than solely due to better computers, new advanced methods strongly rely on computers for their validation and effective use. Put in a different way, if you are going to compare two texts, you can do it with traditional pencil and paper; but if you are going to compare fifty texts with each other, you need sound computational methods. (de Smedt, 1999, Chapter 1, online)

Another persistent theme has been the question of the interrelatedness of the traditional and digital humanities. Judging by the 1966 foreword to *Computers and the Humanities* (the field's first journal), at that time digital humanities was not considered as being distinct from traditional humanities. In the Prospect, the following was written:

> We define humanities as broadly as possible. Our interests include literature of all times and countries, music, the visual arts, folklore, the non-mathematical aspects of linguistics,

and all phases of the social sciences that stress the humane. When, for example, the archaeologist is concerned with fine arts of the past, when the sociologist studies the non-material facets of culture, when the linguist analyzes poetry, we may define their intentions as humanistic; if they employ computers, we wish to encourage them and to learn from them. (1966, p. 1)

Setting boundary lines between digital humanities, what it is and is not has also concerned many. In 2002, for example, Unsworth reflected that the mere use of the computer in humanities research does not make that research digital humanities:

> One of the many things you can do with computers is something that I would call humanities computing, in which the computer is used as tool for modelling humanities data and our understanding of it, and that activity is entirely distinct from using the computer when it models the typewriter, or the telephone, or the phonograph, or any of the many other things it can be (2002).

This is a point that is echoed by both Orlandi (2002) and de Smedt (2002), the latter choosing the evocative analogy [and surely echoing (Masterman, 1962)] that

> The telescope was invented in 1608 and was initially thought useful in war. Galileo obtained one, improved it a little, and used it to challenge existing ideas about the Solar System. Although a magnificent new technology in itself, the telescope was hardly a scientific tool until Galileo used it to create new knowledge (de Smedt, 2002 p. 99).

Orlandi (2002), while not denying the potential of the computer to fundamentally change humanities, argued that 'part of the humanities was "computed" well before computers were used'. Willard McCarty, one of the most prolific contributors to the questions of what digital humanities meanwhile states 'I celebrate computing as one of our most potent speculative instruments, for its enabling of

competent hands to force us all to rethink what we trusted that we knew' (2010).

Since 2009, when William Pannapacker described digital humanities as 'the next big thing' (2009) in the Chronicle of Higher Education, a number of articles, blog posts (and even a *Downfall* detournment) have been appearing, with increased alacrity, setting out the many varying interpretations of digital humanities that are now current.

At the time of writing, some important themes include whether digital humanities is 'a social category, not an ontological one' (Alvarado, 2011), whether one must programme or not to be a digital humanist (Ramsay, 2011 cf. Sample, 2011), and the notion of Big Tent Digital Humanities (for example, Pannapacker, 2011a,b).

Answering the question 'What is digital humanities?' continues to be a rich source of intellectual debate for scholars. It is commonly observed that the humanities is characterized by its focus on process and it is the process of exploring this question, rather than attempting to definitively answer it, that holds the most value for the many who debate it. In addition to the blog posts and articles discussed above the question has also been explored over the past 3 years as part of the 'Day in the life of the Digital Humanities' community publication project that brought together digital humanists from around the world on to document their activities on that day (http://tapor.ualberta.ca/taporwiki/index.php/Day_in_the_Life_of_the_Digital_Humanities). Gibbs (2011) has categorized these definitions in a useful post that reveals the many differing interpretations that are current. Indeed, at the current time, not only does a comprehensive definition appear to be impossible to formulate, some have argued that it might ultimately prove unproductive, by fossilizing an emerging field, and constraining new boundary-pushing work (Terras, 2006, p. 242). Indeed, McCarty has argued for the fundamental importance of the self-reflection that appears so prominently in the literature of the field and comments 'What is Humanities Computing? This, for the humanities, is a question not to be answered but continually to be explored and refined' (2003, p. 1233).

Given such issues, we decided that it would be methodologically unsound for our project to aim to focus on the digital humanities community only as it would compel us to make ultimately arbitrary decisions about who is in and out of the field. Furthermore, from a technical perspective, digital humanities has mostly applied and refined existing technologies from Computer Science and Engineering rather than developing completely new technologies so an understanding of this history is also vital to our study. Indeed, there is also the issue of processes of reciprocity with other disciplines and academia as a whole that remains to be explored. We therefore decided to paint the scope of our project on an extremely wide canvas and will not focus on digital humanities scholars and practitioners alone. However, given the audience of this publication, we have selected interviews from digital humanities scholars to present here.

4 Why oral history?

...a tape recorder, with microphone in hand...can transform both the visitor and the host. On one occasion during a playback my companion murmured in wonder, 'I never realized I felt that way'. And I was filled with wonder too. It can be used to capture the voice of a celebrity, whose answers are ever ready and flow through all the expected straits. I have yet to be surprised by one. It can be used to capture the thoughts of the non-celebrity...and those 'statistics' become persons, each one unique. I am constantly astonished. (Terkel, 1974/1997)

As an historical approach or methodology, oral history offers significant possibilities to a study like this. Even inexperienced but empathetic and knowledgeable interviewers are capable of capturing real insights and revelations about the lives of individuals and communities. For example, recently a novice student interviewer investigated the origins and development of molecular biology in the 20th century by interviewing some of the key pioneers.

In addition to capturing the details of scientific discovery and professional rivalries in an emergent discipline, the interviews uncovered fascinating reflections on race and the treatment of women in the male-dominated world of laboratory science. The capture of this rich and vivid material was all the more surprising as it had not been the intention of interviewer to explore these areas but had found several of her interviewees volunteering to speak about these things.

This section will examine how and why, when used carefully and thoughtfully, oral history makes possible the writing of richer, more human histories of different communities, groups, and disciplines. Despite being commonly associated with history from below approaches, in fact whatever community the oral historian chooses to study (including in this case the origins of an emergent and multidisciplinary academic community), by using life history approaches they have the possibility of constructing a collective biography of that community, peopled by 'real' individuals set within a context and environment. This is a history that is better equipped to explain the origins, subsequent developments, and responses to challenges that that community experienced. With care, oral history can contribute to a grounded history that encompasses structures, cultures, and the collective development of knowledge but also acknowledges through personal narratives the agency and creativity of a plurality of individuals, and not just the great men (and women) of scientific advancement (Plummer, 2001).

So what is oral history and how does it differ from social science interviewing, journalism, or witness testimony for instance? Although the interview process and oral narratives are key shared components, oral history has some specific characteristics that differentiate it from the interview or testimony. First, it is of course usually historically focused (the subject of the research can be near contemporary but there is almost always a longer historical frame of reference) but unlike oral traditions, it tends to focus on the first hand memories and direct experiences of one generation. Even if the subject of the study is memory and how individual and collective memories are constructed and transmitted, oral

history asks about the past to better understand its representation and use in the present. Second, oral history is both a physical historical record (being a recording of some sort, most likely audio or video but perhaps also a textual transcript of the interview) as well as a historiographical approach by which the record is made, or perhaps more radically by which history itself might be made and remade. This notion of oral history as a methodology that results in the active creation of a historical record through the interaction of two or more individuals, the interviewer, and the narrator is a key one (Abrams, 2010).

In this context, it is instructive to briefly outline the origins and history of modern oral history. Memory, eye-witness accounts, and storytelling always played a significant role in the construction of public history accounts but were side-lined in favour of the official documentary record in the course of the 19th and early 20th centuries with the development of history as an academic and scientific discipline. The formal origins of modern oral history as a clearly defined historical practice and record are generally traced back to the establishment in 1948 by Allen Nevins of the Oral History Research Office at Columbia University, an initiative soon followed at other North American universities in California and Texas. The focus of these early programmes was 'elite interviewing', which aimed at capturing the thoughts, memories, and experiences of prominent figures from the worlds of politics, business, and justice. Nevins saw the value of oral history as part of a 'systematic attempt' to record from 'living Americans who have led significant lives a fuller record of their participation in the political, economic, and cultural life of the last 60 years' for the benefit of future researchers. Even within this 'elite' history approach there was a strong element of capture and recovery of potentially lost or hidden histories. With strong contemporary resonances, Nevins was motivated to act by concern that developments in office technology (notably the phone replacing the letter) meant that the records that had previously been available to document the thoughts and actions of leading politicians, scientists, and businessmen would not be available to future researchers and thus the gaps left by these records must be filled by recordings of direct testimony and interviews (Nevins, 1938, p. iv).

Another, perhaps even more influential, strand of oral history with roots in local history, folklore studies, and programmes such as the Federal Writers Project, was also motivated by the urge to recover. Its subjects were not the elites but those excluded or hidden from traditional historical research. In 1960s and 1970s, popular interviewers and chroniclers of (extra-)'ordinary' life such as Studs Terkel, as well as those working in new social history, women's history, labour history, and Black history became frustrated, in Raphael Samuel's words (1972), with the bureaucratic bias and partiality of much traditional historical work and sought out new sources, including oral histories, that would allow them to document histories from below and recover those who Sheila Rowbotham (1973) described as being hidden from history (Smith, n.d.). Although aspects of oral history methodologies and approaches have evolved in the intervening years, Rob Perks (the UK's National Sound Archivist) has critically reflected that in contrast with a more pluralist US discipline, oral historians in the UK have continued for the most part to be focused on local communities, histories from below, and the stories of those who might be considered somewhat marginalized rather than the whole of society (Perks, 2010).

This dominant strain of history from below oral history faced heavy criticism from traditional historians who not only frequently opposed the focus of these new histories but also questioned the rigour and reliability of oral history as a historical source. Such histories were dismissed as trivial, unscientific, based on flawed memory and recollection rather than contemporary and authentic documentation, and without long-term historical value (Ritchie, 2003, p. 156). Oral historians countered these criticisms first by arguing for the reliability of oral testimony when collected under the right conditions by professionals, and when cross-referenced with other available sources. However, a number of influential advocates of oral history argued that the approach had the potential to transform not only the subjects of history but also the practice of history. Paul Thompson's influential *The Voice of*

the Past, first published in 1978 and regularly revised and reissued since, argued the case for oral history as a transformative and disruptive approach, 'transforming both the content and the purpose of history' (Thompson, 2000, p. 3). For Thompson and others, oral history had the potential to change 'the process of writing history . . . along with the content' because the 'use of oral evidence breaks through the barriers between the chroniclers and their audience; between the educational institution and the outside world' (Thompson, 2000, p. 8–9). Under the influence of feminist and feminist-inclined writers, oral history also enabled a study of histories that were more inward, private, and domestically focused. Histories that not only sought to capture what happened in the public realm but also what people thought and felt, offering the possibilities of history 'not only more democratic than earlier ones but also more feminine and domestic', which 'privileges the private over the public sphere' (Samuel, 1995, p. 161).

Perhaps the most significant shift in oral history, however, was the turn towards memory, orality, and narrative. Rather than seeking to demonstrate the reliability of oral testimony, writers like Alessandro Portelli (1979/2006) and Luisa Passerini (1979) advocated embracing the very subjectivity that made oral testimony different and special—examining the stories people tell and how they tell them, and the absences, falsehoods, and silences in oral testimonies with regard to what this reveals about the construction and articulation of individual and collective memories of the past in the present (the past as it is remembered rather than the past as it was). Alistair Thomson's review (2007) of the 'four paradigm transformations in oral history' characterizes this decisive turn towards memory and subjectivity as the second paradigmatic shift. The subjectivity and special quality of oral history was further emphasized by the third paradigm shift, an interdisciplinary focus on the interview itself, and in particular on the potentially uneven relationship between the interviewer and interviewee and how that relationship crucially shapes and effects the content of the interview. Drawing on the considerations of ethical research and the power relations inscribed in the research processes being developed by feminists,

anthropologists, and sociologists, oral historians like Michael Frisch (1990) elaborated an approach to interviewing, which incorporated recognition of co-creation and shared authority over the interview process between interviewer and interviewee and which acknowledged the importance of informed consent being obtained and maintained throughout the interview process.

For the most part, oral history rejects social science conventions of the anonymity of the interviewee. Rather it seeks to give space to individual voices and agency in any given context and to honour, not obscure, the identity of those voices. However, in this context, it is perhaps even more imperative that researchers should seek to fully comprehend the relationships within the interview process, attempt to equalize disparities of power between the interviewer and interviewee, and to acknowledge and support at all points through the process the interviewee's authorship and authority over his or her words.

In the USA, the study of the contribution of 'elite' individuals and communities remains a notable strand of oral history practice. Business organizations and academic communities frequently sponsor oral history projects, sometimes out of vanity or to mark an anniversary but more significantly also to capture the valuable corporate or disciplinary memories that would be lost without a specific effort to explicitly collect that knowledge through oral history interviews. Ronald Doel's review (2003) of oral history projects on science in America illustrates some of the many attempts since the 1950s to document the development of different scientific and research communities. Reflecting changing social interests and developments in oral history thinking and practice, these projects exhibit a clear shift from asking focused questions of a few key individuals about specific occupational and disciplinary matters to being more interested in the social and cultural development of ideas, experimentation, and discovery. Employing such 'conversational narratives' can help to identify the many contributors to the collective development of scientific and academic knowledge and yield 'important insights about disciplines and intellectual communities, all the while focusing on individual

storytellers, their social and professional contexts and their world views' (Doel, 2003, p. 357). While the corporate or disciplinary focus is less common in the UK (Perks, 2010), such projects do take place as part of the National Life Stories programme or within professional or disciplinary groupings. One such contemporary project, the Oral History of British Science (OHBS), adopts a similar life history approach to understanding academic and scientific research to the one advocated by Doel. In contrast with earlier interviews, which focussed entirely on 'significant discoveries and inventions', the OHBS life story approach tries to 'illuminate the process of science, the intrinsic attitudes of scientists' and describe the 'life, routines, and human emotion' associated with scientific research (Blyth, 2010, p. 21–2).

Providing the project is methodically planned with clear objectives, the interviewers are well-prepared, knowledgeable, and empathetic, and the whole process is conducted to high ethical standards in which questions of consent and ownership are thoroughly negotiated, oral history is a powerful and dynamic methodology for the recovery of rich histories, which might otherwise be in danger of being lost or forgotten. Oral history offers the possibility of populating hidden histories of individuals with real lives and backgrounds, of examining the motivations behind actions and is as relevant an approach to the recovery of the origins and history of an academic community or discipline as it is for a working-class community or disappearing occupation largely absent from the official records. By taking a prosprographical or collective biographical approach to community of practice histories, oral history enables the researcher to go beyond the familiar and the obvious to include the lesser known or overlooked, and to document not just the facts of immediate concern to the study in question but also the context that framed and underpinned those developments.

5 Themes that emerged from interviews and notes for the future

To accompany this article five oral history interviews have been published in Digital Humanities Quarterly 6.3 (advanced access 2012). They were carried out with Willard McCarty, Geoffrey Rockwell, Harold Short, Ray Siemens, and John Unsworth.

During the pilot stage of our project, we mostly interviewed people with a high profile in the field. We had but a limited amount of funding, and a considerable portion of this was used to host a 1-day symposium on the history of computing in the humanities that we organized in University College London in September 2011. Therefore, we carried out some interviews at Digital Humanities 2011; otherwise we aimed, where possible, to interview scholars who are based in London, as we are; when a face-to-face meeting was impossible, we carried out interviews via Skype and recorded them if the interviewee gave their permission.

Although the pilot has now ended, we are continuing work on this project and are carrying out interviews with many other people, these interviews will also be made freely available online. We are also aware of the issue of gender balance and that interviews selected for publication were carried out with white, western males only. We will give the utmost attention to rebalancing this as the project proceeds. Indeed the role of women in the history of computing in the humanities and the gender balance of the field, present and past, would make a most interesting research topic.

We present both sound files and transcripts of the five interviews that we have selected for publications. The transcripts have been lightly edited for clarity or, if relevant, to reflect edits that were made to the sound files to prevent some potentially sensitive or private information being exposed. Although the interviews were semi-structured, they all had a common aim: to uncover aspects of the hidden histories of individuals, their backgrounds, and motivations in order to recover a more nuanced picture of the origins and history of computing in the humanities. Though questions do vary from interview to interview, depending on the responses of the interviewee, all interviews aimed to explore a set of core questions:

(1) Please tell me about your earliest memory of encountering computing technology

(2) Did you receive formal training in programming or computing?

(3) How did you first get involved in what we now refer to as digital humanities?

(4) Which people particularly influenced you and how?

(5) What about scholars who were not using computers in their research. Do you have some sense of what their views about humanities computing were?

(6) What was your first engagement with the 'conference community' and how did that come about?

The issues and themes that emerged from the interviews in response to these questions are too extensive to discuss here; indeed, other articles will be dedicated to this. Here we will briefly mention two issues.

Firstly, the question 'what is digital humanities?' is at present an open and vigorously contested one. The interviews presented here reveal that the routes through which digital humanities scholars first encountered and used computing technology are as diverse as the answers to the 'what is digital humanities?' question. Looking to the present time, as more and more dedicated digital humanities courses are being founded in countries such as, *inter alia*, the UK, Germany, Canada, and the USA, students have the opportunity to undertake formal and focused training in the subject. It will be most interesting to see, in due course, how this formalization of the routes of entry into the discipline will affect interpretations about what it is. Will we still be having the 'what is digital humanities' debate in 10 years? How important will an understanding of the early history of the emergence of the discipline be to it?

Secondly, the depiction of digital humanities scholars as being or having been 'the underdog' is reasonably prevalent in informal conversations and in, for example, events such as round table discussions at the end of conferences. The interviews presented here, both explicitly and implicitly, offer many interesting insights into this; indeed, it cannot escape one's attention that all of the scholars interviewed here are either Professor or Professor emeritus. The link between myth and history is a fascinating and much debated one, and numerous examples exists,

especially in medieval times of the sometimes fluid boundaries between the two, for example, when mythical genealogies were created and presented as histories to justify a particular claim on the shape of the present, such as land holding or leadership claims. Geoffrey Rockwell's interview includes an especially interesting reflection on this for digital humanities:

> We need to be conscious of the stories we told ourselves, and whether those stories are stories and not necessarily true. It's not necessarily the case that we were persecuted. It may be that we had to tell those stories and now we need to start telling different stories. We need to be careful about the switch to empire building, that's the wrong term but I think the sociologists of discipline coined that. I think, there's a stage where all of a sudden you get into power and then when you get into power, you just continue to replicate many of the patterns of whoever it was that was in power before and you begin to exclude people, just like you felt excluded, and so we've got to be very careful not to become the sort of people we used to warn people about. (Rockwell *et al.*, 2012)

6 Conclusion

We have demonstrated that the history of computing in the humanities is an almost uncharted research topic. Much interesting work in this area remains to be done, both by the digital humanities community and beyond. We argue that the Hidden Histories pilot project and the selection of interviews presented here demonstrate that oral history has a central role to play in this important research. The five oral history interviews published here form primary sources which can be used in the writing of histories of computing in the humanities; furthermore, they have revealed new information and interpretations that cannot be gleaned from published scholarly articles.

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