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Oral History in Information Systems Research: a reconsideration of a traditional tool

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Abstract

Oral history is a little used research technique in information systems, however even though it may seem a rather traditional tool, it is one that is worthy of consideration. Information technologies have now been around for over 60 years and scholars have begun to investigate the lessons that can be learned from studying their history. Despite the ready availability of online data, personal oral histories can add insights and a context missing elsewhere. This paper outlines the potential of oral history for information systems researchers, and explains how it differs from other interview techniques. Research was carried out with curators of relevant oral history repositories and the potential their collections offer for researchers is discussed. Examples are also given of research projects based on the use of oral history. The paper concludes by exploring the possibilities for wider use of this research method in the discipline.

Keywords Oral History, Elite Oral History, History of Computing, Information Systems, Research Methods

1 Introduction

Information systems (IS) is a fast moving discipline driven by rapid advances in technologies. It may seem there is little value in going back to look at technologies and management practices that are now obsolete. However, information systems is more than the study of technology and management techniques alone. The interplay between technology, systems and organisations is multi-faceted and complex; cause and effect cannot be easily untangled. The study of the history of computing has often been more about technical developments than computing's social and organisational impacts. Stepping back and taking in the big picture facilitates an understanding of the long-term economic, social and political forces that shape events (Mason et al. 1997a; Toland 2017). This is where the historical approach can add considerable value despite the fast moving nature of the discipline. Information technologies have now been around for over 60 years and in recent times there have been calls for researchers to begin to pay attention to the history of their discipline (Zhang 2015). For example, Journal of Information Technology had a special issue devoted to history (Land 2010) and Communications of the Association of Information Systems has recently introduced a new section specifically focussed on history and philosophy (Hassan 2017).

The use of historical methods in information systems was pioneered by Mason, McKenney and Copeland in their studies of Bank of America, Lyons Electronic Office (LEO) and American Airlines (Mason et al. 1997a; Mason et al. 1997b). Other significant studies have researched the history of IS at Texaco (Porra et al. 2005) and reviewed the introduction of early IT systems in the life insurance industry (Yates 2005). More recently an article by Porra, Hirschheim & Parks (Porra et al. 2014) updated the use of the historical method in IS and suggested a more pragmatic approach to its use better suited to IS researchers with little or no formal training in history.

Historical research uses a range of research methods, some of which will be familiar to the information systems researcher, others less so. Just as in many other disciplines, a number of methods are usually used in conjunction with each other in order to triangulate research and achieve greater rigour. This paper will focus on one particular tool, oral history, which has been little used within information systems, but which offers much potential. In particular, it is an ideal way of bringing the social context back into focus (Lean 2013). Oral history involves carrying out an in-depth interview for the purpose of contributing to the historical record. It is a little different from other research techniques in that the oral history can have a dual purpose, being an end artefact in itself and also being used to inform other research. Oral history can bring context and provide information not readily available in other forms and is a technique that belongs in any information systems researcher's tool bag.

This paper has two aims: to raise awareness of the potential of oral history as a research method and to introduce oral history collections of interest to information systems researchers. The article begins by explaining what oral history is and what it can add to research that a standard interview cannot. The history of the development of oral history will be briefly discussed, alongside the various flavours it has developed in different countries. The particular benefits and also the limitations of oral history will be covered. Oral history is not widely used in IS, as will be demonstrated by the scant results of a literature search, and the reasons behind this will be considered. The use of oral history as a research tool will be explored, both in terms of creating oral histories and in also in terms of using oral histories already available in different repositories worldwide. Interviews were carried out with the curators of three repositories, and a number of other relevant collections have been identified. Examples of information systems projects which use oral history as a key research technique will be discussed. The paper will conclude by identifying some of the potential ways in which oral history could be used to add to the canon of IS research.

2 What is Oral History?

Oral history is a method of qualitative interview that emphasises the perspective of the interviewee. An oral history interview is "for the record" (Grele 1989). Interviews are inductive and open ended, going through a storytelling process guided by the interviewer. As such the interviewer and the interviewee co-create knowledge through a collaborative process (Leavy 2011). The power of oral history lies in this storytelling approach (Janesick 2010), oral histories provide rich descriptive data, which can be used to explore, describe, explain and in some cases to generate theory (Leavy 2011). They can be carried out in many different ways for diverse purposes; sometimes the interview is intended for a formal repository, other interviews will be disseminated online, or used for personal research.

Typically an oral history interview will be much longer than a standard research interview, often being carried out over several interview sessions. Depth is favoured over breadth and there will be fewer

participants than in a standard research project and in some projects there may only be one interviewee. Unlike other research based interviews oral histories do not focus on a particular topic or research question but concentrate on the participant's life, seeking to frame their individual experiences within the larger context. The oral history interview does not just involve the construction of a text, it is also a social event that reflects not only the social relations between interview and interviewee, but also those of the larger culture (Grele 1989). Table 1 illustrates how oral histories compare to other commonly used interview techniques.

Most Open-Ended		Most Structured		
Narrative inquiry	Oral history	In-depth interview	Structured interview	
2 x 60 min interview	3 hours	45 to 75 mins	30 to 60 minutes	
Passive interview	Open ended,	Topic focussed with	Ask same question in	
technique	interviewer is a guide	flexible questions	same order	

Table 1: Qualitative Interview Continuum (adapted from Leavy, 2011, p 12)

Narrative inquiry has been used in information systems research (Leong and Tan 2013; Tan and Hunter 2003), most notably by Gordon Hunter to capture the stories of Chief Information Officers (Hunter 2007). Narrative inquiry involves the use of open-ended qualitative interviews where a minimalist passive interview technique is employed. The interviewer doesn't interrupt the interviewee, they begin by asking an open narrative inducing question and then let the interviewee tell their story in their own words. Rapport is essential and is built by techniques such as eye contact and nodding (Leavy 2011).

Narrative inquiry and oral history share many similarities, both allow the interviewee considerable time to speak from their own point of view. However, in an oral history interview the interviewer plays a more active role, acting as a guide and asking critical questions that cut across each individual's recollections. Other types of interview commonly used in information systems research, such as indepth and structured interviews, are typically shorter and more tightly topic focussed.

Other features that are unique to an oral history interview are the way micro-macro linkages are created by connecting an individual's biographical account with the wider social and historical context. Oral histories are a way of filling in the historical record by providing firsthand accounts of events when other records are missing or incomplete. Oral history is also increasingly explicitly recognised as an act of co-creation, and though the main focus in on the interviewee, the role of the interviewer is also significant (Leavy 2011).

Oral history is generally agreed to have begun in 1948 with the pioneering work of Allan Nevins (Nevins 1996) and Louis Starr (Starr 1996). Nevins and Starr began to collect the otherwise unwritten recollections of prominent individuals for posterity (Dunaway and Baum 1996). Nevins, in particular, was very focused on the business field and his work was partially funded by bequests from corporations. This early focus on capturing the stories of "great white men" was criticised by later oral historians who began to use oral history as a method to "give a voice" to marginalised groups, such as the working class, the illiterate and women. This "history from below" movement was particularly evident in the UK where the oral history movement developed close ties with socialist, communist and feminist perspectives (Perks 2010). Paul Thompson, who played a leading role in creating the British Oral History Society, had a strong commitment to preserving the experiences of the working class (Thompson 2000). This campaigning focus is worthwhile and has resulted in some emotionally powerful work, for example capturing the voices of holocaust survivors and former slaves. However, to some extent this approach has restricted the more widespread use of oral history as the means have become confused with the ends (Feldstein 2004). Oral history can be used to preserve the memories of powerful elites just as readily as those of the powerless. The method itself is not intrinsically conservative or radical; instead its effect depends on the social purpose for which the interview is carried out and how the interactions between interviewer and interviewee play out (Feldstein 2004). This consideration is relevant to information systems where research is often carried out with the more privileged sections of society.

Thomson describes how the use of oral history has developed through four paradigm transformations (Thomson 2007). After the Second World War there was a growth in the use of memory as a source for historical research. During this period positivist critics of oral history argued that memory was unreliable and often clouded by personal bias and nostalgia. In the 1970s oral historians addressed this criticism by pointing out that this unreliability was actually a strength and that the very subjectivity of memory informed, not only the meanings of historical experience, but also the relationship between

past and present. In the 1980s this post positivist approach became more overtly political and oral history was increasingly used for advocacy and to empower marginalised groups. The third major paradigm change was a recognition that the oral history interviewer could not be regarded as objective, and in fact the interviewer plays a key role in the creation of the interview, which is a subjective act of co-creation. The most recent paradigm transformation is the use of digital technologies which are changing the way oral histories are collected, stored and shared, opening up new possibilities for analysis and interpretation to be carried out across large datasets of interviews (Thomson 2007).

Whether interviewing elites or the marginalised, researchers using oral history operate under rigorous ethical codes (Feldstein 2004). Obviously interviews are neither anonymous nor confidential and it is critical that participants have control over their own stories and understand the implications of giving permission for their interview to be deposited in a repository for posterity. Hand-in-hand with this is the importance of training for potential interviewers in specialised oral history techniques which stress the importance of ethics, alongside any training in sound and video techniques needed to record the interview.

3 Why use Oral History?

It could be argued that since the advent of the internet, society has become swamped with information making the collection of individual oral histories unnecessary. While it is undoubtedly true that there is more data around, often it is password protected and not easy to obtain. Conversely the prevalence of electronic data often makes the archivist's job harder as there is no longer a file of papers to mine for information. Also corporations are increasingly protective of their intellectual property and reluctant to give researchers access to their files (Grad and Johnson 2012). Added to this is the fact that many key decisions are not made in meetings and are frequently unrecorded; the stories behind how these choices were made are often only available by listening to people's own accounts of events.

Information systems does not just focus on the technology artefact but also takes into account people and organisations as an integral part of any system. This broad focus makes getting peoples' personal accounts critical to obtaining a full understanding. Increasingly IS scholars are looking beyond their focus on the business world and trying to appreciate the broader impacts of information systems on society. In order to address some of these grand challenge questions (Seidel et al. 2017), it is necessary to look back and reflect on how IS has impacted society in the last 60 years; the voices of individuals are an important element in developing that appreciation.

Where oral history has been used in IS related fields, such as the history of computing, it has generally been to capture the stories of elites. This situation also exists in other subject areas such as chemistry as the collection of oral histories is often motivated by a realisation that pioneers in a particular field are reaching an advanced age. There is a long tradition of capturing the stories of key leaders in the field and award winners such as Nobel Laureates (Lundin 2012). There has also been some work in recent years to capture the experiences of end users (Lundin 2012), but it would be misleading to present the use of oral history in IS as a radical option, mainly it is being used to capture the stories of a highly specialised group. This focus on elites can be justified by the fact that they are leaders who have often had considerable influence on social change (Keulen and Kroeze 2012).

There is already a plethora of information available about such key figures and collecting an oral history could be regarded as superfluous. However that may not always be true, as those at the top of their field will probably have given their story before but often in a very standard way. A well prepared oral historian will be able to get a new angle on a well-known story in order to gain fresh insights. Though they generally already have a voice in history, sources about many important aspects of their activities may be lacking (Lundin 2012). Oral sources have also been found to be a useful supplement to written documents, bringing in tacit knowledge and information about social aspects that are not found in academic papers and official reports. Other potential interviewees may not be so prominent but could have been very central to networks, for instance, personal assistants and engineers may not have had the opportunity to tell their stories before and often have very revealing insights. Professional societies have generally been instrumental in the creation of oral history archives which explains the emphasis on elites. For example, the Chemical Heritage Foundation has a collection of interviews with "leading scientists and entrepreneurs" (Lundin 2012).

Oral history is often criticised as memory can be untrustworthy. As with any other research method a process of triangulation, using other available records, can help to mitigate this. An important step in any historical research is the process of writing the transcript (Mason et al. 1997b), which means adding the contribution of research to the historical record. An individual oral history may be just one

thread in this record, but often it is the strand that can be used to weave others together making significant connections and bringing important insights to other archival materials.

4 Relevant Oral History Repositories for Information Systems

Preparing an oral history is a worthwhile, but undoubtedly time consuming, process as the interviews are much longer and the process of preparing the transcript or abstract is done much more prudently than for a standard interview. It can also be expensive, involving travel costs and the use of top quality audio and video equipment. Oral histories can collected for personal research but also for posterity, meaning they are often made available for future researchers to use. Therefore one option for the information systems scholar is to use interview recordings or transcripts from existing repositories.

In order to collect data on oral history repositories relevant to information systems three one hour long interviews with curators of oral history collections were carried out. Information about other repositories was collected from journal articles and web searches. A standard protocol was developed for the interviews which addressed the aim, scope and availability of the collection. Human ethics clearance was obtained, the interviews were non-confidential and participants gave permission for their names to be used. An overview of the collections discussed is provided in Table 2.

4.1 AIS History Project

In 2013 the Association of Information Systems (AIS) appointed Professor Ping Zhang, in a volunteer capacity, as the first AIS historian with a brief to oversee the IS history initiative (Zhang 2015). One of the main objectives of the history project was to collect the life stories of founder members of AIS, LEO award winners and former editors of the Association's flagship journal, MIS Quarterly. Topics covered in interviews include career history and views on the IS field. This project is focussed around collecting the history of IS as a profession which differentiates it from other research being carried out to look more broadly at the history of IS itself.

Video interviews are often carried out at major conferences, the interviewer is the AIS historian herself or another senior AIS member. The videos are widely available through the AIS website (Association of Information Systems). No transcripts are prepared, but brief summaries of some interviews are provided in Communications of the Association of Information Systems (Zhang 2015). To date around 20 interviews have been collected (Zhang 2016).

4.2 British Museum – National Life Stories

The National Life Stories collection was established by the British Museum in 1987 and consists of over 1000 oral histories (British Museum). The interviews have been carried out across a wide cross section of British society including both elites and ordinary people. In 2009 the museum received funding to add a new strand to the collection by building an oral history of British Science. As of 2017 over one hundred life stories with British scientists and engineers have been collected, some of which are relevant to information systems (Lean 2013). Researchers can listen to interviews onsite or online using the SoundServer archive and transcripts are prepared when funding is available. The collection has been criticised by some British oral historians for being an elite project financed by those with money and influence (Perks 2010).

4.3 Charles Babbage Institute

The Charles Babbage Institute has a collection of around 400 oral histories, the majority of which are freely available online, as long as the interviewees have given permission. Most interviews have been produced by the institute staff themselves, who are PhD historians, though some interviews in the collection have been donated. Around two thirds of the oral histories have been collected as part of a sponsored research project; which means interviewees have often been selected because they are working in a specific area like computer security. Associate Director Jeffrey Yost explained that conducting an oral history is an expensive business as there is pre-interview preparation, research, travel costs then editing post interview (Yost 2015). Preparation varies according to the project, but generally includes collecting archival material, reading and developing questions, and usually takes around three to four days. An extensive list of around 60 or 70 interview questions are drafted, though normally not all are used, and the interviewer maintains the flexibility to follow up unexpected points that arise during the course of the interview.

An interview will typically last around three hours and afterwards the interview is transcribed, cleaned up and then sent to the interviewee for editing. Interviewees are encouraged to only do light editing. The primary audience for the interviews is researchers, however download statistics indicate that some

are clearly being read just for personal interest. No videos are produced partly due to cost, and also because, from a research point of view, they don't add much value. Audio is available but it is very rare for anyone to request to listen to it. Collections include oral histories relating to ARPANET, Control Data Australia, and Women in Computing (Yost 2015).

Institution	Scope	Approximate number of interviews	Interviewer	Availability
AIS History Project	Collecting memories of senior member of AIS and	20	AIS Historian & senior members of AIS	Video freely available No transcript
British Museum	award winners Oral History of	100 but only some	Interview protocol provided Trained subject	Through
- National Life Stories	Science	computing related	specialists	SoundServer and on site, Some transcripts
Charles Babbage Institute	Research grade interviews	400	PhD historians with oral history training	Transcript freely available
Computing Educators Oral History Project	To highlight computing teaching which motivates females	30	Volunteers Interview protocol provided	Videos and transcripts freely available
Computer History Museum	Elite computer scientists and special interest projects	500	PhD historians & volunteer senior practitioners	Video and transcript
IEEE Annals of the History of Computing	Publishes biographies of computing pioneers	20	Academics	Articles available in journal
IEEE History Centre	Elite engineers	800, not all directly relevant to computing	PhD historians & volunteer practitioners	Transcripts freely available Audio/video available on request
National Library of NZ	National collection, some computing related material	20 computing related	Both professional oral historians and volunteers National Library provides training	Audio with abstract with permission

Table 2: Examples of oral history repositories relevant to information systems

4.4 Computing Educators Oral History Project

Computing Educators Oral History Project (CEOHP) is a volunteer run project to collect and preserve the oral histories of computing educators (CEOHP n.d.). There is a specific emphasis on recording the stories of female educators, with the objective of identifying how they can act as role models to improve the numbers of women entering the computing field. The project was initially funded by a National Science Foundation grant and contains over 30 interviews. The interviews are conducted by volunteers with both videos and transcripts made available on the web. A key goal is to analyse the interview data using grounded theory to uncover any common themes (CEOHP n.d.).

4.5 Computer History Museum

The Computer History Museum has a collection of around 500 audio and video interviews and adds 60 to 90 interviews each year. The interviews are carried out by curators and volunteers who are senior practitioners in their field (Lundin 2012). Interviews aim to cover the interviewee's early life, education, career, and greatest achievements, along with their advice for young people entering the field. Interviews are also carried out for special projects, for example, the Semiconductor Special Interest Group is collecting the stories of those working in the semiconductor industry in Silicon Valley and also internationally in Taiwan and Russia. Other projects include the History of Wi-Fi and the Venture Capitalist oral history series. Like the Charles Babbage Institute they also have some donated oral histories. Full transcripts are available. The oral histories are used by researchers, the media and students. Excerpts from interviews are also used as part of exhibitions within the Museum itself (Cruz 2013).

4.6 IEEE Annals of the History of Computing

IEEE Annals of the History of Computing is an academic journal which includes occasional biographies of key figures in computing. These are often based on an oral history interview. The biographies are very popular with readers with 89% rating Pioneer Memoirs as the journals most valuable content (Grad and Johnson 2012). Typical examples are the biographies of digital sociologist Roxanne Starr Hiltz (Subramanian and Haigh 2013) and security expert and former ACM President Peter J. Denning (Walden 2012).

4.7 IEEE History Center

The IEEE History Center has a collection of almost 800 interviews. Each interview is typically around two hours long. Since the year 2000 there has been a transition from audio to video aided by assistance from the IEEE TV team. Generally an interviewer sets up a camera over their shoulder, though occasionally a separate camera operator is sent out. Initially it was feared this would interfere with the rapport between interviewer and interviewee but people quickly got used to the cameras (Geselowitz 2015).

Financing the collection of oral histories is an ongoing issue and, as with AIS, interviews are often carried out at conferences when key people are together. Full transcripts are available for most interviews, as is audio, but no one is really interested in listening to the audio in full (Geselowitz 2015). Sound clips are embedded in the transcripts on the website to give a flavour of the conversation.

The IEEE has had a volunteer history committee since 1963 and from the late 1960s members started to interview some of their senior peers. In 1980, the decision was made to bring in professional historians and archivists, though in recent years volunteers have been brought back in to supplement their work. A webinar is offered to engineers who want to interview their fellow members "peer-topeer". This has the advantage of saving on travel, plus potential interviewers have the contacts and the appropriate technical knowledge. It also opens up the possibility for conducting interviews in languages other than English, though, as of 2016, 90% of interviews are in English.

The IEEE collection is much broader than computing, including power engineering, signal processing and other such areas. Senior Director, Michael Geselowitz regards collecting the oral histories as more a preservation task than a research task, as the IEEE is a public history centre jointly sponsored by IEEE and the Stevens College of Arts and Letters (Geselowitz 2015). The oral histories are an incredibly important historical resource, and these key engineers are not being interviewed by anyone else. At present, the history of technology is a very small field; hopefully in the future researchers will want to know more about it.

In deciding who to interview the Center staff wear two hats, they are public historians of technology and engineering, but also institutional historians for the IEEE. This means that oral histories are routinely carried out with past Presidents, medal of honour winners and other key staff who retire. There is only a very small amount of money allocated for this. Different IEEE units will often commission the History Center to carry out a set of oral histories, for example the IEEE Computer Society may get in touch to say "We are having a conference and there are six pioneers coming, could you come and interview them?" There are a small minority people who refuse to be interviewed and interestingly, non-technical professional staff are the most likely to refuse.

The Center employs four PhD level historians, all of whom are experienced in oral history. The general rule of thumb is eight hours of preparation before an interview, four hours for the actual interview, and 16 hours of post interview processing. The preparation includes asking for a Curriculum Vitae,

research articles, and doing a web search. For volunteer trainees these guidelines are outlined in the webinar. After the interview the audio is stripped out and sent to a professional transcription service specialising in technical transcriptions, and who time stamp it. The staff member who carried out the interview goes through the transcript and cleans it up, after which it is sent to the interviewee for checking. The final stage is to format it for the web and post it. Time stamping is stripped off for the web version, but an archival time stamped version is retained.

Awareness of the oral histories is difficult to ascertain; researchers are asked to request permission to cite the interviews but not all of them do that. The aim is that journalists, scholars, and popular science writers will use the collection and there is some evidence that they do (Geselowitz 2015).

4.8 National Library of New Zealand

This repository has been included as example of a national collection. The focus is general, but there is some IS related material in the collection. Two sets of interviews were conducted for the 25th and 50th anniversary of the New Zealand Computer Society resulting in around 20 oral histories. There is also material from projects where the introduction of computer technology was a key part of peoples work experience. For example there is a project from the 1980s with post office workers and telecommunications workers, and the use of the old style telephone exchanges is an essential part of that (Evans 2017).

Two of the key figures in establishing the National Libraries oral history collection, Judith Fyfe and Hugo Manson, came from a radio broadcasting background and to them the authentic voice was an essential part of the oral history. Therefore, after talking to curators of other collections, a decision was made not to provide transcripts for interviews in order to encourage people to listen to the interview itself, as tone of voice and hesitations can mean so much. Instead of a transcript each interview is accompanied by an abstract which is time stamped and includes key words and topics covered.

The National Library offers training courses on interviewing, recording and abstracting for potential interviewers. Limited funding is also available for small scale projects. All material deposited in the collection has to abide by the New Zealand Oral History Societies ethical code. Curator, Linda Evans explained that she was uncomfortable making material accessible via the internet, as, at the time when people agreed that their interviews could be available, they could not have imagined how they would potentially be used in the future. This does raise an interesting ethical dilemma for curators of oral history collections (Evans 2017).

4.9 Summary of Collections

Oral history collections have different purposes, for example, some are very formal, while others are more temporary and informal. Professional societies such as IEEE and AIS, motivated by a desire to collect the stories of their long term members, are a major driver for the collection of oral histories. This does mean that their collections tend to be based around elite figures (often the elite of the elite), but there are also examples of collections focused around particular topics such as computer security. The exception to this is the Computing Educators Oral History Project which has a specific mandate to increase the number of females studying computing.

This is not intended to be an exhaustive list, just to give a flavour of the resources that are available. The list is very Anglo centric in its focus, which is a definite limitation. The French, Germans and Scandinavians in particular have strong traditions in the history of computing so there are undoubtedly other collections available globally.

5 Examples of Oral History research in Information Systems

There is a dearth of technology related material in mainstream oral history literature. In order to illustrate this a literature review was conducted by searching through leading oral history journals for the twenty year period from 1996 to 2016. The journals searched were The Oral History Review (US based), Oral History (UK based), The Oral History Association of Australia Journal (renamed Oral History Australia Journal) and Oral History New Zealand. In total only 15 articles were found which related to recollections of working life and of these only two, one about Australian Postal Telegraphists (Raxworthy 1999) and one about computing pioneers in New Zealand (Toland and Whitman 2015) were IT related. The journals were also scanned for articles related to relevant theory and the use of digital technologies in pedagogy. Though technology related topics are scarce in the literature, oral history is a technique used by researchers in the history of computing, and some examples of relevant research projects are outlined in the following discussion.

One of the most wide-ranging projects was a Swedish initiative, "From Computing Machines to IT", carried out between 2007 and 2008. The aim was to create, collect and preserve sources on computing history from a user-centred perspective. Collecting oral histories was a key part of this project and 160 interviews were conducted with users and creators of computer systems (Lundin 2012). The Software History Project is another significant research project that made extensive use of oral history. This was a collaborative venture between the Computer History Museum and Charles Babbage Institute to collect and publish material about the history of software industry. During the course of this project 129 oral histories were collected (Grad and Johnson 2012).

Oral histories are also collected in more informal ways for individual research projects. For example Laine Nooney has an ongoing project researching the history of the US video game company Sierra Online. Her approach is to conduct oral history interviews with all the people she can find who used to work for that company, not just the game designers themselves, but also the secretaries, salespeople and distribution team (Nooney 2013). For her research on the history of home micro computers in Australia and New Zealand, Melanie Swalwell also used oral history to collect people's memories of playing computer games (Stuckey et al. 2013). Sometimes the oral history is specifically collected for widespread public consumption. For example, Brian McCullough produces a series of Internet History podcasts that have over 10,000 subscribers (McCullough n.d.).

These different examples show that there is a blurring of practice in the use of oral history with techniques being adapted to the needs of different research projects. If there is an intention to collect an oral history for posterity it is recorded and catalogued in a formal way, however for projects where the oral history will only be used by the researcher or shared with immediate research participants the process is more relaxed. In practice many of the distinctions previously outlined between oral history, narrative inquiry and in-depth interviews become less relevant, as individual researchers modify interview procedures to fit their own purposes.

6 The Possibilities for Oral History in Information Systems?

Why should information systems scholars consider using oral history? It is certainly true that collecting an oral history is a significant undertaking with no immediate payoff. Interviews are collected to "add to the historical record" which is a worthy aim, but possibly not of direct significance to the researcher carrying out the interview. However, as can be seem from the examples, oral histories can be collected in a focussed way, built around their contribution to a particular project. In some cases, they can be the only primary sources available or can be used to make significant connections when other data is incomplete. Oral history is often used in conjunction with other research methods to add meaning to existing archival sources and fill gaps in the record (Leavy 2011). There are many historical questions in the IS discipline where the use of oral history could add value, for example to illustrate the social construction of meaning around the use of business technologies and how they have actually come to be used in practice.

Professional societies have a keen interest in collecting oral histories and can often provide funding, therefore researchers could explore the possibilities of collaborative projects that are mutually beneficial. There has been little activity to date to collect oral histories in Asia, Australia, New Zealand and the Pacific, with most efforts centred on the USA and Europe. This gap in the record opens up the opportunities to collect rich research data in these countries and build up Southern hemisphere collections. In some cases non-traditional sources of research funding, such as community lottery grants, are available to support such projects.

The oral history material that has been collected so far in technology related subjects does tend to be the stories of "great white men", and in many ways it is appropriate to collect the personal histories of the people who have made a significant contribution to the field. However, information systems have had widespread impacts throughout business and society and little work has been done to collect the stories of end-users. The Swedish project to document the use of computers throughout society is an exemplary case of what can be done here (Lundin 2012). Nooney's work to explore the history of a games company by interviewing workers in every part of the company (Nooney 2013) is also a good example of how to use oral history in a more inclusive way in order to generate "history from below".

The availability of oral histories online, either as transcripts or in video format, opens up possibilities for scholars to make the most of the opportunities afforded by the digital transformation of oral history collections (Thomson 2007). Techniques emerging in the digital humanities (Nyhan and Flinn 2016) can be used to mine existing data sets in order to find new ways of analysing and interpreting information. This may involve some consideration of the ethical dilemmas opened up by using

someone's personal memories in ways they could not anticipate at the time they agreed to share them (Evans 2017).

7 Conclusion

"Computing has changed the world" (Misa 2007), yet researchers have only just begun to address the interaction of computing with large scale transformations in economies, societies and cultures. As the study of the history of information systems shifts from focussing on pioneering inventors to developing a fuller understanding of the underlying issues needed to comprehend the more complex relationship between the design and use of computers (Lundin 2012), oral history has an important role to play. It is a research method that adds a richness often lacking in other techniques, and is an important means of collecting data about the social context that can assist in addressing some of these challenging issues

Oral history is underused in information systems research, especially as paper or online documentation is often available. However, oral history unearths understandings and connections that other methods do not, and most significantly it often helps to put other data in its proper context. Oral history is an important method for adding to the transcript and building up a contribution to the historical record. Collecting oral histories and using the information already available in oral history collections offers great potential for information systems researchers to gain new insights and add a valuable skill to their toolkit.

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