Using Oral History to Study the Personal Digital Archiving Practices of Modern Soldiers

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ABSTRACT

Drawing on literature from personal information management studies and on the topic of documentation of American military experiences, this article aims to help the archival profession understand the personal digital archiving practices of modern soldiers. During the summer of 2019, the author conducted oral history interviews with US Army soldiers at Fort Hood to address the questions of what personal records soldiers keep of their military experience, what they do—if anything—to preserve them, and how they value them. This study found that both military and socio-technological factors contribute to a lack of digital recordkeeping among modern soldiers, that soldiers' reliance on social media as ad hoc digital preservation tools leads to poor digital preservation practices, and that a majority of soldiers do not see their digital records as worthy of future historical study. The article concludes with a discussion of actions that can address these issues.

KEY WORDS

Personal archiving, Digital preservation, Oral history

In their 2014 article titled "Documenting the American Military Experience in the Iraq and Afghanistan Wars," Heather Soyka and Eliot Wilczek discuss the challenges of documenting two of the longest conflicts in American history. They focus specifically on the documentary challenges inherent in capturing US Army operational records during counterinsurgency warfare, where the use of smaller units, lacking designated historians, are a necessity; where critical information related to decision-making is transmitted through informal communication platforms that are difficult to document; and where many of the most significant activities of a successful campaign are often informal and not routinely recorded.[1] The authors make it clear that their work does not examine individual service members and their families or the role that personal records play in documenting modern warfare. Drawing on the literature from the field of personal information management studies and the work of Catherine Marshall among others, this article aims to bridge the gap in the archival profession's understanding of the personal digital archiving practices of modern soldiers. During the summer of 2019, the author conducted oral history interviews with US Army soldiers at Fort Hood to address the following research questions:

- What personal records do soldiers keep of their military experience, especially after they have been deployed?
- What do soldiers do, if anything, to preserve personal records of their military experience?
- How do soldiers value personal records of their military experience?

This study found that both military and socio-technological factors contribute to a lack of digital recordkeeping among modern soldiers, that soldiers' reliance on social media as ad hoc digital preservation tools leads to poor digital preservation practices, and that a majority of soldiers do not see value in their digital records beyond their lifetime—or at least do not see them as worthy of future historical study (two notable exceptions are discussed). The article concludes with a discussion of actions that can address these issues.

The Archival Landscape and The Need for Personal Digital Archiving

The landscape for the collection and preservation of personal military records in the United States includes the National Archives and Records Administration (NARA) and the Library of Congress (LOC), military branch archives, and institutional military archives or collections (such as those held by universities). NARA does not typically collect personal military records. Instead, its domain is preserving unit operational records and administrative records, including official military personnel files (records detailing information such as a soldier's duty stations and assignments, awards they have received, and any disciplinary actions taken against

them) and the DD Form 214, Certificate of Release or Discharge from Active Duty, which a soldier receives upon leaving the military and which details information such as duty assignment, rank, and military occupation specialty at the time of their departure from service. LOC does collect personal military records through the Veterans History Project,[2] which was developed by LOC's American Folklife Center. It is primarily an oral history archives, but it also collects materials such as manuscripts, audiovisual records, photographs, and artifacts. Its engagement with born-digital material is limited to files submitted on storage media which must be accompanied by physical copies of the records; email and online content is not accepted, although they are recognized as important record categories, and donors are encouraged to consult a helpful online personal archiving guide that covers stewardship of a range of born-digital materials.[3] While it has a sizeable collection of records from modern soldiers (a search of their database yields 4,727 collections from soldiers who served post-2001), it is heavily focused on the analog-era soldier, with more than half of its total collections coming from soldiers who served in WWII.

Each military branch has its own repositories for its records. For example, the US Army (which this article focuses on) has both the US Army Center of Military History and the US Army Heritage and Education Center (USAHEC). It is the latter which is tasked with preserving unofficial records, including unit histories, personal papers, diaries, and photographs. At the time of writing, USAHEC does not have a codified collections policy, although they are in the early stages of drafting one. Although any soldier can offer personal records for preservation at USAHEC, the organization's collecting efforts focus only on those records whose content illustrates the history of the US Army on topics such as training, the development of strategy and tactics, or senior leadership. Army regulations prohibit the solicitation of material donations, so USAHEC must rely on soldiers to seek them out as a repository for their personal records. Much like LOC's Veteran History Project, USAHEC currently has a heavy focus on the analog-era soldier with few collections from those who served post-2001. Likewise, all born-digital records collected by the USAHEC must be submitted via CD/DVD (army regulations prohibit the use of USB drives), and the organization does not currently have the infrastructure to collect and preserve email or online content.[4]

Recently, some universities with experience in the preservation of military records have attempted to balance the analog-era collecting focus of other military archives with a focus on the personal digital records of post-2001 soldiers. In addition, without the same organizational focus as military branch archives, these universities can help document a wider range of experiences from the lives of modern soldiers. In 2015, The Vietnam Center and Sam Johnson Vietnam Archive at Texas Tech University—the world's foremost archival collection documenting the Vietnam War—extended its efforts to documenting post-2001 conflicts with the

creation of the Archive of Modern American Warfare. A year later, Edward Benoit at Louisiana State University launched the Virtual Footlocker Project,[5] an initiative to develop an open-source, cross-system application for capturing and preserving the personal digital records of modern soldiers. Initial phases of the Virtual Footlocker Project have examined the personal archiving and recordkeeping habits of modern soldiers to identify the different digital records being created by this population. Later phases will research best practices and procedures to better equip archivists to assist veterans in preserving their personal digital records. This exciting project presents a promising future where archivists may one day be able to leverage the technology and strategies stemming from this research to ensure that soldiers' personal digital records are collected and preserved.

Presently, however, whether their institution is governmental, military, or academic, archivists tasked with collecting the records of modern soldiers must grapple with the same challenges. Beyond the obvious technical challenges of collecting and preserving the digital records in myriad formats that are prevalent among modern soldiers, there is also the challenge of how to engage with a nontraditional donor population—a population of individuals in their twenties and thirties who are far less likely than older analog-era generations to be thinking about how to preserve their legacy by donating their records to an archives. Given the ephemeral nature of digital records, there is an urgent need to safeguard soldiers' personal digital records until such a time that they arrive at one of the archival institutions poised to house and preserve them. To ensure that soldiers' personal digital records survive, archivists must place their hope in soldiers themselves as able stewards of their own records. This article seeks to examine the current state of personal archiving among modern soldiers so that archivists can begin to identify opportunities for intervention.

Literature Review

This article is guided by the personal information management studies literature, a corpus with many connections to traditional archives and records management (ARM) principles.[6] The work of Catherine Marshall is particularly prominent in this regard. In a 2006 study[7] examining subjects' personal digital archiving practices, Marshall and her colleagues Sara Bly and Francoise Brun-Cottan found that their subjects erroneously believed that any one of five simple file replication strategies (system backups, moving individual files from an old computer to a newer one, replicating files on external media, emailing themselves files as attachments, or retaining old computers with legacy files) was enough to ensure the long-term preservation of their digital records. Not only was this approach—what Marshall terms "benign neglect"—revealed to be inconsistently applied in practice[8] (e.g., a hard drive had not been backed up in months due to a recurring error in a subject's backup procedure, a CD could not be found for replication when it was needed,

external media was found to be no longer compatible with a subject's computer, an old computer used to archive legacy files was found to be no longer functioning), but it was also accompanied by a belief in the inevitability of digital record loss. Interestingly, this belief was also paired with the subjects' seemingly contradictory belief in the incorruptibility of digital files.[9]

In her later work, Marshall continued to explore the benign neglect concept where one both believes in the permanence of digital files and that digital preservation (read file replication) mitigates but never fully protects against inevitable digital record loss. A 2007 study[10] coauthored with Frank McCown and Michael Nelson looked at the problems posed by benign neglect for the personal archiving of online digital records. The authors found that their subjects' personal archiving strategies included file distribution across a multitude of platforms, each with varying capabilities that resulted in file copies that were not necessarily equivalent and were a tax on subjects' memories in trying to remember where everything had been stored; circular reasoning regarding the role of original files versus online copies (i.e., it did not matter if the online platform dissolved because the subject had master files on their computer, but it also did not matter if the master files were lost because the subject could request file copies from the online platform); and an unwarranted level of trust in Internet service providers to consistently back up online files with which they have been entrusted or provide adequate notice if they could no longer host the materials.

One of the important questions that permeates much of Marshall's work is one of value—a concept with deep connections to the traditional ARM principle of appraisal.[11] Regarding the value of personal digital records, Marshall's research has shown a disconnect between people's stated beliefs in the importance of their digital records and the lack of consistent and dedicated actions taken toward these records' long-term preservation, which benign neglect represents. Marshall extended her examination of the concept of value into the area of social media in a 2014 paper[12] coauthored with Frank Shipman, which looked at the use of Facebook for storing personal digital records. The authors found that despite a belief in the transience of activity on Facebook and a stated understanding that terms of service transfer ownership rights of uploaded records to the social media platform, 54% of survey respondents indicated using Facebook to archive personal videos and photographs, and both felt ownership over these materials and would want to preserve them if they were to ever leave the platform.

Marshall's concepts of benign neglect and the value of personal digital records have been further investigated by others. In their 2012 study[13] of the personal digital archiving practices of emerging writers, Devin Becker and Collier Nogues identified the same strategies Marshall identified as representing benign neglect. For example, they found that 28% of survey respondents stored copies of drafts of their work simply in a different folder on the same computer as the originals and that

31% of respondents did not keep track of previous versions of their work stored in more than one location; many of those who did claim to track previous versions did so relying solely on memory and/or their computer's desktop searching capabilities. Surprisingly, even those respondents who identified as information professionals noted that their personal digital archiving practices were nowhere near the level of their professional ones, which suggests a diminished value of personal digital records for these writers.[14] This is further supported by the finding that 80% of respondents had never looked for information on best practices for archiving their personal digital records (despite nearly the same number of respondents claiming they would welcome such information).[15] The authors outline a number of reasons to explain this apparent lack of value ascribed by writers to their personal digital records—from the exigencies of the creative process to a lack of feeling for digital files and a dulling of their authenticity caused by their endlessly replicable nature—but they place primacy on a lack of education regarding digital archiving best practices that leaves writers with a sense of hopelessness when it comes to adequately caring for their personal digital records.[16] The authors conclude their article with recommendations to address this knowledge gap.

Donghee Sinn, Sujin Kim, and Sue Syn took a quantitative approach to the study of personal digital archiving behaviors in their 2017 study[17] examining the factors influencing these behaviors and the challenges to implementing digital archiving best practices. Although the authors found the same conflation of file replication with long-term digital preservation identified in previous studies, they conclude that there is no statistically significant relationship between specific digital archiving challenges—digital curation decision-making, the distributed nature of digital records, and the fast accumulation of digital records—and subjects' archiving practices. Instead, they found that general technology-related factors, such as technology efficacy for backup usages and technology dependency on storage media, as well as individual factors, such as a strong awareness of one's personal history and general memory efficacy, were much more directly associated with archiving practices. The authors argue that in order to improve the public's personal digital archiving behaviors, information professionals should focus on raising individuals' technological confidence in areas such as search functions, storage media use, and backup functions, as well as increasing public awareness of digital records as important materials for one's personal history.[18]

The International Research on Permanent Authentic Records in Electronic Systems (InterPARES) Project has done much to identify the full array of considerations for successful personal digital archiving.[19] The project's guidelines for digital record creators outline several practical steps to ensure continued accessibility, fixity (both in form and in content), identification, integrity, organization, authentication, and protection (against both malicious and accidental data loss, as well as technological obsolescence) for personal digital records before they are turned over to

the care of a trusted custodian such as an archivist or other information professional. As the guidelines identify what may be considered ideal personal digital preservation, it is a useful document to aid information professionals in taking a targeted approach when devising interventions designed to improve individuals' personal digital archiving practices—particularly in regard to potentially complex actions in which individuals' technological confidence may be low.

There has been little research done to examine the personal digital archiving practices of modern soldiers. In his 2017 pilot study[20] for the Virtual Footlocker Project, Edward Benoit examined soldiers' preferred communication methods, the types of personal digital records they created, and their storage preferences. He found that among deployed service members, web-based email providers such as Gmail (rather than ISP or military provided email) were the most common communication methods; photographs and videos were the dominant records created, with a small percentage of soldiers keeping a blog or an offline journal; and Facebook was the primary choice when using social media both for communication (the third most common method after email and telephone) and digital record storage (the third most common method after local storage on either hard drives or cell phones).

For personal digital archiving, the concepts of benign neglect and the value of personal digital records pervade the literature. The present study aims to examine these concepts with regard to modern soldiers and to help fill the gap in the literature concerning this population by providing a rich set of personal accounts that can bring the current state of soldiers' personal digital archiving practices into sharper focus. This study is the first of its kind to employ oral history as the research method.

Methodology

Data Collection

The author conducted oral history interviews during the summer of 2019 with US Army soldiers at Fort Hood in Texas, one of the largest military installations in the world and home to many recent veterans and active-duty service members. There were 31 individuals interviewed: 28 were male, 3 were female, 6 were Black, 21 were White, and 4 were Latinx. The subjects ranged from specialists in their early twenties who had yet to deploy to captains who had experienced two tours in Iraq and/or Afghanistan to lieutenant colonels nearing retirement who had experienced multiple deployments that included conflicts prior to 2001 (see Table 1). The interviews ranged from 45 minutes to 4.5 hours per subject. Each interview consisted of a complete oral history of the soldier's life up to their current duty station and covered their background and service history, as well as the central research questions.

Oral history was chosen as the research method in order to investigate the ways in which subjects' personal history (such as major life events or familial upbringing)

Table 1. Subject demographics

Subject	Rank	Sex	Ethnicity	Subject	Rank	Sex	Ethnicity
1	Sergeant 1st Class	Male	White	17	Major	Male	White
2	Specialist	Male	Latinx	18	Sergeant	Male	White
3	Captain	Male	White	19	Specialist	Male	White
4	Captain	Female	Black	20	Sergeant	Male	White
5	1st Lieutenant	Female	White	21	Captain	Male	White
6	Master Sergeant	Male	White	22	Staff Sergeant	Male	Black
7	1st Lieutenant	Male	White	23	Sergeant Major	Male	White
8	Sergeant	Male	White	24	Captain	Male	White
9	Sergeant	Male	White	25	Captain	Male	White
10	Staff Sergeant	Male	White	26	Lieutenant Colonel	Male	White
11	Specialist	Male	Latinx	27	Sergeant	Male	Black
12	Major	Male	White	28	Sergeant	Male	Latinx
13	Staff Sergeant	Male	White	29	Master Sergeant	Male	White
14	Specialist	Male	Latinx	30	Specialist	Female	Black
15	Major	Male	Black	31	Command Sergeant Major	Male	Black
11	Lieutenant Colonel	Male	White				

affected their personal digital archiving practices. An awareness of personal history and a concern for personal digital records as important for one's personal history have been shown to significantly influence personal archiving behaviors.[21] A limitation of this methodology is that it is quite time consuming, which, when coupled with the difficulty of securing the participation of soldiers at a large and incredibly active duty station such as Fort Hood, results in a smaller sample size than those produced by the methods of surveys or less broadly focused interviews used in similar studies. The oral histories conducted for this study are publicly available online at https://search.amaw.ttu.edu/.

Data Analysis

The author analyzed the data produced from each oral history interview using open coding. The author recorded oral history interviews with the consent of the subjects. The author developed and applied the coding scheme based on common topics that emerged across subjects' data. The coding scheme had two variables:

recordkeeping practices and preservation actions. The codes were further grouped into two broader categories that emerged across all oral history interviews: short-term value of personal records and long-term value of personal records. The three major categories for soldiers' personal archiving behaviors presented in the findings emerged from this analysis.

Findings

Communication Methods

During their early deployments, subjects' preferred method of communication with loved ones back home was primarily physical letters. Many soldiers cited complaints about the quality of available Wi-Fi as the reason for sending few emails during these deployments, although some would take allotted time to make use of military supplied networked computers to send email messages. Interestingly, email use did not increase significantly on later deployments, with soldiers opting for applications such as Facebook Chat (later Facebook Messenger), WhatsApp, and Skype for both text and audiovisual communication. Text communication typically consisted of short, daily check-ins, while Skype was reserved for longer conversations. Later deployments saw technological advances that helped make this type of communication more common. For example, speaking about his deployment to Kuwait in 2017, Subject 7 notes:

> We get these like Wi-Fi pucks, or what we call them. You basically charge them overnight and you just preload them with whatever you want. You just stick it in your lower pocket. You walk around with it all day so your phone is always connected and then you just use WhatsApp and then you get, you know, YouTube, Spotify. That's majority how we would get our information.

With this shift to more frequent synchronous communication, many of the soldiers discussed increased pressure from being more involved in the stresses of family life; this was particularly prevalent among those soldiers who had young children. Some soldiers mentioned attempts by family to mitigate this pressure, like the soldier whose family waited until he had returned from deployment to inform him of a beloved uncle's death while he was away. The increased pressures that come from a greater connection with family life while deployed have been supported by previous studies.[22]

Personal Archiving Behavior: No Preservation

With regard to their personal archiving behaviors, subjects were categorized into three groups: No Preservation, Physical Preservation Only, and High Preservation.

No Preservation individuals were those who either kept no records whatsoever of their military experience or who were doing nothing to actively preserve the records that they did have. The majority of subjects (58%) fell into this category. There were three main reasons for why a soldier would fall into the No Preservation category. First, there was evidence of a general lack of digital preservation knowledge among soldiers. Digital materials were kept on storage media including SIM cards, cellphones, external hard drives, thumb drives, and discs, and, in most cases, these storage media were kept in cool, dark, and dry conditions. Some soldiers even went so far as to lock these storage media in a safe or physically separate them from similar storage media so as not to mix them with other digital records or risk them being accidentally wiped. However, beyond these precautions, the soldiers did nothing to preserve the digital records. In fact, following their deposit in the safe or other storage location, the soldiers ceased to pay attention to the storage media until they wished to retrieve records or add to the collection. This was particularly troubling considering that many soldiers would transcribe physical records such as letters or journals using Microsoft Word with the goals of increased legibility and decreased physical storage space, but also with the misguided understanding that the simple act of transferring records to digital formats was all that was required to ensure their long-term preservation.

Social media was heavily used by soldiers as digital preservation tools, with Facebook used for photographs and YouTube used for moving image recordings. Despite the social media platform's inherent problems for digital preservation—from the company's poor track record for data protection highlighted by the Cambridge Analytica scandal[23] to its practice of adding its own metadata to uploaded photographs, which can interfere with the provenance of the original records and strip away important contextual information[24]—a common refrain reported by soldiers when asked how they preserved their digital photographs was "Facebook keeps them." This was done both on an individual as well as a group basis, with entire units often having a Facebook page with multiple photo albums from particular deployments or missions, and unit members uploading collections of photographs over time. The same was done with YouTube for moving image records. As a consequence of these readily accessible online archives of photographic and moving image records, many soldiers did not bother to make records of their own experiences. Instead, their personal archives of their military experience consisted primarily or wholly of other people's records—photographs and videos downloaded from the Internet that came to represent a record of either specific experiences with a particular unit or place or the general military culture in which they served.

Subjects told stories that suggest the presence of a sharing culture among modern veterans. At relatively stable locations, often a transfer station such as the one in Kuwait or Bagram Airbase in Afghanistan, soldiers would take chance encounters with fellow soldiers from varying units as an opportunity to build their collection

of what they considered to be the most captivating digital photographs and videos documenting the war. A reliance on social media for digital preservation shifts this sharing culture to the online space, thereby increasing its reach exponentially. The result of this is demonstrated by anecdotal evidence from the author's work as archivist for the Archive of Modern American Warfare at Texas Tech University. During appraisal and accession actions, the author consistently found whole collections of photographs and videos accumulated (rather than created) by donors, and often these materials were duplicates from the collections of other donors who did not share any overlapping service history. These digital records largely documented major events during the time of the donor's military service (such as the capture of Saddam Hussein), "action scenes" (such as videos of an airstrike resulting in casualties or photographs of the aftermath of a car bomb detonation), or commemorative videos for a particular unit (one with whom the donor may or may not have served). While one may argue that this behavior mimics the behavior of analog-era soldiers in the creation of physical scrapbooks of their military experience (which often contained generic newspaper clippings and military press photographs documenting major events during their service), the sheer scale of this activity during the digital era has contributed to a decrease in personal recordkeeping that had not been an issue for the soldiers of previous generations. The presence of a sharing culture and the reliance on social media for digital preservation has implications for the robustness of the historical record for modern conflicts and the diversity of voices being preserved.

General apathy was a second reason for why a solider would fall into the No Preservation category. Some soldiers would keep digital records but then appear unconcerned about whether they could ever be retrieved again. A common answer to a question regarding where the soldier kept their digital records was "They're on my phone somewhere." Many soldiers would still have the original phone that they carried during their service and used to record their experiences, but then would talk about switching to a new phone model and not being overly concerned with ensuring that everything transferred to each new device. Indeed, some reported digital records losses because of this action.

> Interviewer: And how are you storing these photographs? Where are they now? What are you doing with them?
>
> Subject 11: They're in my phone. They're in my phone, but I do catch myself not fully, not fully keeping them sometimes because whenever I sometimes like to switch phones every two years, or every year, once in a while and when I do sometimes I end up changing like different companies or like different brands of phone. Just trying out different brands. So sometimes I don't get my stuff backed up or anything like that. For all the situations that it's happened, I just, I don't know, I just don't think much of it.

Physical recordkeeping was also a challenge for these individuals. Some spoke of having the idea of keeping a journal but then would give up on it after deciding that it was not their style or they simply could not get into the habit of doing it. For others, the value they placed on their personal military records would change after major life events, such as the soldier who kept a detailed journal of his time in Iraq only to later throw it away after a painful divorce because he did not want the memories he now associated with that time in his life. Regardless of the reason for the feeling of apathy toward recordkeeping, it was almost always a temporary mindset. The vast majority of those soldiers who did not keep any records stated that it was one of their biggest regrets.

The third reason why a soldier would fall into the No Preservation category had to do with security concerns. Soldiers interviewed stated that there were no specific army regulations dictating the criteria for acceptable recordkeeping. Instead, prior to deployment, soldiers would be given an operational security briefing that included general guidelines for personal documentation—ultimately leaving it up to each individual soldier to determine how these guidelines were to be followed. For soldiers working in active war zones (many of whom carried certain security clearances during their tenure), there were obvious implications that affected their ability to create records of their experiences. Subject 7, a lieutenant, had recently returned from a deployment to Syria as part of Operation Inherent Resolve, the effort to contain and ultimately eradicate the Islamic State of Iraq and Syria (ISIS). His records—including notes of his activities and digital photographs stored on his phone—were kept solely as an operational necessity, and, not only were they closely monitored by keeping brief shorthand notes and disabling his phone's cloud service to avoid inadvertently backing up photographs, but they were destroyed once they had served their immediate purpose. He insisted that those under his command follow similar procedures, even in instances where records were specifically requested by superiors.

> Subject 7: I think we made it very, we actually made it very, very clear like hey whatever you do, especially when we're in, you know, not the United States where we don't know who controls the phones or we don't know who controls the data or anything like that, we're like don't distribute anything. Yeah it was, it was kind of a pain, especially when our boss would be like hey, we want pictures of this and this and this, and like we're not gonna send you those.
>
> Interviewer: So how did that get resolved? If someone was requesting photos?
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> Subject 7: It would more or less be like, alright, send me that request in writing. Then I would be like hey, this is what I don't feel comfortable with and they say do it and okay it's in writing so . . .

Behavior such as this is typical and understandable for high-level operations and the need to strike a balance between minimizing records for operational security and

keeping records for later historical study of those operations is a tricky line to walk. However, there were also instances of soldiers being overly cautious and declining to keep records of their experiences even in situations where doing so would not have been an obvious security concern. This was most prevalent among the lower enlisted specialists and young officers who foresaw making a career out of the army. These individuals mentioned feeling uncertain as to when it would and would not be appropriate to take records (especially photographs and videos) during their deployment and opted to not take any records at all rather than risk security violations or censure from a superior.

Personal Archiving Behavior: Physical Preservation Only

The second category that emerged from the research findings was the Physical Preservation Only (PPO) group. Soldiers who fell into this category were those who exhibited good physical recordkeeping but failed to adequately preserve their personal digital records. A minority of subjects (only 10%) fell into this category. Subject 4, a captain, had kept shoeboxes of correspondence between her and her fellow soldier/husband while deployed, but was also storing a fairly significant collection of digital records on flash drives in her office drawers with no attention being paid to their preservation. While cognizant of this issue, she did not seem able to make time to attend to the preservation of these digital records, despite admitting the significance that some of these records still carried for her.

> Interviewer: How are you storing these records that you have, digital records?
>
> Subject 4: Not well, because the military moves so often I don't know where I put stuff. . . . My flash drives, they're in my office. I'm pretty sure they're in my office, in a cubbyhole. But the pictures, and there's only one picture, I guess, I know I have saved from my deployment which is not funny but funny enough is the picture that we took because my husband came to visit me for like our anniversary or something like that. That's when his bird got shot down and it got shot down is the picture we took right before he went on the bird. So I do have that picture and that picture, I mean like I could have lost him that day. So that picture I do know I have but the others . . .
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> Interviewer: . . . If we know that, that you know like putting photographs on an external hard drive. If you just leave that external hard drive for ten years, that hard drive could be corrupted and everything on it could be lost sort of thing. So are you aware of that? Are you trying to, you know, one day I'm going to, you know, get this preserved sort of thing, but you're too busy?
>
> Subject 4: Yes I do, I do. I keep saying like I'm just gonna go and just print everything out and then I'm like oh I forget and then I get busy, but I do, I do because that does actually happen. My husband had a hard drive with stuff and it just dropped and that was it like you know? I think we could only get some things back from it, so I do have a lot of pictures from that time on digitally saved, but I do need to get them, you know,

> put on the Cloud or print them out just so I have another way to access them. I've just been too busy. But I do. I do want to make sure I keep those memories.

While sharing many of the same reasons for their lack of proper preservation actions as the No Preservation group, low general technology efficacy was particularly evident for the PPO group. Many soldiers stated that they were "not really a technical person" or language to that effect. Subject 4 said that she wanted to show her daughter that, by choosing the physical communication format of letters and preserving these physical records of their military experiences, she and her husband "were keeping it old school, even in 2009, the age of technology." This suggests a reluctance to engage too extensively with digital recordkeeping and an admission that this position may be an antiquated one. It should be noted that Subject 4 was a thirty-something woman (twenty-something during the time of her deployment) and advanced age was not shown to be a correlating factor in displaying signs of low technology efficacy. The author noted anecdotal evidence that some soldiers may be passing on the propensity for avoiding digital recordkeeping to future generations as well, as a thirty-something veteran was overheard telling a group of ROTC students at a Veterans Day event to "make sure to write physical letters home and maybe keep a journal. You're really going to appreciate having that physical record of your experience when you get back."

Personal Archiving Behavior: High Preservation

The final and most intriguing category of subjects was the High Preservation group. This category consisted of those soldiers who kept detailed records of their military experience in both physical and digital formats and exhibited excellent stewardship of these records. A moderate number of soldiers interviewed (32%) fell into this category. Subject 9 had a large photograph collection that included approximately 400 digital photographs that he had backed up, as well as a number of physical albums where he kept countless photographs that he had taken with disposable film cameras. He also had a full set of correspondence between himself and his parents written while he was deployed. All of these physical records were stored in places such as a closet or under a bed in the soldier's main residence, and the soldier noted that their cool temperature and absence of light made them ideal for the records' preservation. Subject 10 talked about a medic who had been designated his unit's unofficial historian and who ran a digital photograph archives consisting of photographs from the platoon that was backed up. This same soldier talked about his own records, which included photographs, journals, notebooks, and sketches—all of which were either physically stored in a cool, dark location or digitally backed up. He also did not seem to engage in much appraisal of his personal records.

> Subject 10: Keep everything. There's some things I wish I still had from Iraq, but I still, I mean I have it in my mind, but I wish I had hard copies of them. But just keep everything because you never know when you're gonna need it. A lot of times you, I mean these memories or what not they, I mean they could be memories or anything like that. You just gotta sometimes you bury them and you keep them locked away for awhile and then you remember overtime or they'll come in handy. But other than that I mean digitally, I'd just say keep it all because you never know when you're going to need it. I'd rather not need it and have it than need it and not have it.

This soldier discussed how he was encouraged to take an active role in keeping records of his military experience after his grandmother showed him his grandfather's personal records from the Vietnam War. Many other examples were found in this category of soldiers backing up digital materials using multiple storage media and cloud storage, having their parents or significant others keeping all the letters sent home, keeping storage bins full of physical photographs and personal papers, and keeping daily journals. By far the most committed soldier was Subject 19, who took his VHS-C tape recordings and converted them to digital files (storing the originals in a cool, dark location); he then backed up the digital files along with his collection of digital photographs using both a local RAID (Redundant Array of Independent Disks) system and cloud storage. Determining the characteristics of High Preservation individuals is a fruitful area of future research. By creating a profile of the high-level preservationist, information professionals can more easily identify those community members who can be enlisted to lead personal archiving improvement initiatives at the local level and thereby ensure that authority over the preservation of the military veteran community's records remains with community members themselves.

Discussion

Technology Issues

A number of key observations can be made from the data collected in this study. Despite anecdotal reports of the primacy of digital records, physical documentation is still very much prevalent among modern soldiers. However, with regard to correspondence, there is evidence over the last five years of a slowly emerging trend of replacing physical letters with digital applications such as WhatsApp and Facebook Messenger. This has huge consequences both in terms of the informational value of future correspondence (longform letters being replaced by a medium that encourages brevity) as well as archivists' ability to preserve these digital materials (or indeed record creators' ability to preserve them before they even arrive at an archives). The fact that Facebook controls both of the aforementioned applications makes preserving records of these forms of communication all the more challenging.

With soldiers making heavy use of accounts on social media platforms such as Facebook and YouTube as their personal archives, the need to address the challenges of collecting and preserving social media records becomes even more pressing. Social media harvesting is not aligned with wider web archiving technology, with many archival institutions seeking application programming interface (API)-based solutions rather than traditional web crawling to capture the most unique aspects of social media records: their discursive layers, underlying modular structure, and connection to the rest of the web.[25] There are, however, a number of problems with harvesting data from a social media platform's API: not all platforms make their APIs publicly available; the data is not readily human-readable; every API is different, so there is no standard format for archival storage of API data; many platforms place limits on the use and sharing of API data; and these limitations on the amount of data that can be harvested via the API can make it difficult or impossible to capture content beyond a certain date.[26] The limitations set by social media platforms on the use of their API are governed by terms of service that are subject to change at any moment, which makes the collecting of social media records a legal challenge as well as a technical one.[27]

The challenges of preserving social media records have not gone unanswered. For example, in 2014, Timothy Arnold and Walker Sampson outlined an approach to archiving a collection of Tweets in compliance with the Open Archive Information System (OAIS) model, detailing how best to capture provenance, reference, fixity, context, and access rights information for storage in the Archival Information Package (AIP) alongside the collected Tweets.[28] North Carolina State University Libraries' Social Media Archives Toolkit[29] is another excellent example and includes such resources as a list of harvesting tools (one of which it notes is already no longer maintained because of changes to Facebook's API), an annotated bibliography, and an overview of the legal and ethical implications of social media collecting.

A Question of Value

A big impediment to documentation among modern soldiers is a concern for operational security. This is particularly strong among younger soldiers who are worried about their future career prospects and opportunities for advancement in the military. Army Regulation 530-1 (Operations Security)[30] regulates the recording and dissemination of critical information—defined as information vital to a mission—which, if obtained and acted upon by the enemy, would prevent or seriously degrade mission success. The document lists examples of what may be considered critical information and includes things such as force strength levels, vulnerabilities, specific locations of operations, identification of allies, specific weapon capabilities, mission targets, and casualty figures—in other words, high value information for the successful prosecution of a war. However, AR 530-1 does not mention any

regulations concerning personal documentation of information of value to the soldiers themselves, such as photographs of their living quarters or a journal entry revealing their feelings after surviving an operation. While of course one must be mindful of avoiding the disclosure of critical information in one's personal documentation, AR 530-1 gives no guidance on how to accomplish this. As such, many soldiers opt to avoid documentation entirely rather than risk an accidental operational security violation. The military must find a way to balance operational security concerns with documentation and be able to clearly communicate this to soldiers (especially new recruits). By making clear what is and what is not allowed to be documented (e.g., a clandestine operation in an active war zone versus base life at the rear) and presenting specific strategies for avoiding the disclosure of critical information in personal documentation, the military can help to encourage documentation whenever possible. It can even begin instilling in new recruits the idea that documentation of their military experience is an important component of a soldier's service to their country.

The most important determinant of the personal digital archiving behavior of modern soldiers is the value that a soldier ascribes to their personal digital records. Some soldiers see their military service simply as a steady job—albeit an incredibly honorable one. For example, Subject 11, a specialist who was a child of migrant farmers, spoke about his efforts to improve his economic situation growing up in Mexico by getting an American education and starting a career in the information technology field. The army was seen solely as a way to gain valuable work experience that could be used to transition into employment in the civilian world. The limited value this soldier placed on his military service was reflected in his lack of personal archiving behavior. His personal military records consisted of digital photographs from his first deployment, which he kept on his phone; many of these photographs were lost when he transitioned to a new device (save for a handful that he posted to Facebook). At the time of the interview, this soldier was undecided as to whether he would leave the army after a few years or make it a lifelong career. The findings from this study suggest that should he come to value his military service more as a chosen career, it may lead to a corresponding increase in effective personal archiving behavior.

The findings from this study show that a soldier's personal growth is correlated with greater value placed on their personal digital records and greater documentation over time. Many of the soldiers who were interviewed discussed keeping more records of their experiences on later tours when they had become "more mature" and concerned about having something tangible to look back on from this time in their lives. Some of the soldiers later had children, which caused an increased interest in wanting to preserve their legacy and leave something behind to help their children better understand their experiences. This concept of value was primarily temporally fixed on the life of the individual soldier, as most soldiers saw their personal records

as merely useful tools for short-term activities such as reminiscing about fallen battle buddies or connecting with their children.

Two notable exceptions to this emerged from this study's findings: Subjects 10 and 19. These were soldiers whose concept of the value of their personal records transcended their own lives; in their view, these records were not merely useful for personal remembrance but rather as a public good worthy of historical study. It is no surprise that these individuals are two of the High Preservation subjects discussed above. Subject 10 spoke about being inspired by the sheer breadth of his grandfather's personal Vietnam War records and the boon for military historians that his grandfather represented, as well as a feeling of responsibility to save as much as he could from his own military experiences to model his grandfather's efforts. For Subject 19, the oral history interview was an opportunity to delve into the philosophical underpinnings of modern warfare and the ways in which the study of war is really a psychological study of humankind. He stated his belief that the personal records of modern soldiers can help future generations better understand these areas of study. As he examined his past military experiences, his thoughts were often on his own psychology during his deployments.

> Interviewer: Why do you think you took the photographs that you took and what prompted you to take photographs or record the videos of you personally?
>
> Subject 19: That's a hard question. . . . I had begun to understand, by my second deployment, more of the nature and the importance of, you know, building a historical record and the preservation of that, you know, just for the sake of preserving it itself, you know, rather than, you know, for my wife or for my son to see. . . . And I came across—to maybe further underscore that point—I came across, maybe six months ago when I went back and I was looking through some things, a video that I took in the middle of the night. And I used it, basically, as an audio recorder. And I was venting my frustrations, my concerns. By that time, on my second deployment, I was considering leaving the military and all of the concerns and frustrations that I was having with that. My wife and I had, you know, divorced and my frustrations with her. . . . And it's funny, you know, listening to my younger self talk about all these frustrations and I remember very, very vividly having them because it was a very, very frustrating time.

At the time of their interview, both individuals were pursuing graduate degrees in history, and Subject 10 had taken on responsibilities as a member of III Corps' Military History Detachment. This suggests a correlation between an interest in history education and high-level personal archiving behavior.

Archiving at the Organization Level

One final area of investigation mentioned by some of the more senior soldiers who were interviewed is that of the military's position on documenting its activities and the state of military digital archiving practices at the organization level. This

study looked specifically at service members of the US Army, a military branch that has been making some efforts to improve its digital recordkeeping practices and those of its members. For example, there have been attempts to make greater use of Microsoft SharePoint as cloud storage for soldiers. However, veterans interviewed in this study argued that there is too much rotation in leadership to make any sort of long-term digital preservation strategy viable, and that certain sectors still have record retention schedules that end with wholesale system wipes annually. While it is promising to note that III Corps' Military History Detachment has been deploying soldiers to active war zones to work directly with participants in the field to collect their personal records alongside the official record, these issues identified by the veterans interviewed in this study raise questions about how the US Army is handling the continued preservation of any digital records they collect. Questions also remain concerning how widespread this collecting effort is and whether it is simply capturing operational records or if it is aiming for the full scope of documentation (including personal journals, letters, photographs, and videos) from each conflict. While a useful tool for historical documentation, Military History Detachments have their shortcomings;[31] in order to obtain the most complete record of America's wars in the Middle East, we must turn to individual soldiers themselves.

Conclusions and Future Research

In order to ensure the depth and breadth of the historical record for modern conflicts in the Middle East, the military must find a way to balance operational security concerns with records preservation and communicate this balance to soldiers—especially those who are younger and on track for a military career. Superiors must make clear what is and is not allowed to be documented and encourage documentation to the fullest extent possible. By instilling in the next generation of soldiers the idea that documenting their experiences is part of the service to their country, we can begin to inculcate the importance of the historical record in the minds of future warriors. Archivists should offer classes to teach military personnel better personal archiving habits and preservation strategies in order to give alternatives to a problematic reliance on Facebook and YouTube. Attendance can once again be encouraged by linking proper long-term records preservation with service to one's country. Finally, Military History Detachments should be strengthened and fully equipped to carry out their mission, and leadership in areas of records management should be stabilized so that the work of digital records preservation at the organization level can continue unabated.

While classes designed to teach military personnel effective personal archiving practices may be an option for archivists operating within military organizations, they may also prove to be of understandably low priority for those organizations tasked with innumerable foreign policy and international security objectives. The

question remains of what archivists who operate outside the military establishment can do to impart better personal archiving strategies to military personnel, particularly veterans who have exited the military yet still have personal military records in need of stewardship. The Veterans Curation Program[32] was established by the US Army Corps of Engineers to train veterans to process at-risk archeological collections belonging to the Corps. Designed as a vocational training program aimed at giving veterans marketable job skills, the program teaches basic processing skills including cataloging and photographing artifacts, and cleaning, scanning, and rehousing photographs and documents. The fact that it is a paying program with limited availability, combined with its emphasis on professional networking and building employment skills such as digital photography and database entry that can be applied to a range of fields, means that its impact is limited to those veterans seeking these particular marketable skills whom the program is able to fund. The program also emphasizes physical processing work rather than digital preservation. However, it is an excellent model for what future digital preservation outreach initiatives for veterans could look like.

Universities are in the best position to establish personal digital preservation outreach programs. Many veterans make use of the free education afforded them by their military service to seek career development in higher education, and this population of student veterans can be the focus of outreach initiatives that both instill more effective personal archiving practices in veterans and also recruit veterans to lead personal digital preservation activities from within the veteran community. Academic archivists can take the lead on offering personal archiving workshops for the veteran students at their institutions, thereby contributing to the documentation of the wartime experiences of individual soldiers. Finally, archival educators can also do their part to equip future archivists with strategies for applying their expertise earlier in the records lifecycle up to the point of creation. Curriculum development is one of the primary goals of the Virtual Footlocker Project's ongoing research initiatives.[33] The profession may one day benefit from a more records-creator focused approach to collection development and digital preservation that emerges from the project's research findings.

This study examined the personal archiving practices of a group of US Army soldiers based out of Fort Hood. Further research should be done with larger sample sizes to compare the findings of the current study with those of similar studies of soldiers from other branches and military installations. For example, the findings of the current study might not extend to soldiers in the Marine Corps, which is known for the care and attention it gives to preserving its organizational history and therefore may encourage a greater number of its service members to become concerned about personal digital archiving. Future research in this area should particularly focus on those segments of the military population that are traditionally underrepresented in other documentary domains including women (especially those in leadership

positions), LGBTQ+ individuals, and first-generation immigrants. While the findings of this study suggest that there are inherent problems in the recordkeeping habits of modern soldiers, these problems can be mitigated. By encouraging better personal archiving practices among today's soldiers, we can ensure that we have a robust historical record of modern conflicts for future historians.

Notes

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