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# On Loss in the 21<sup>st</sup> Century: Digital Decay and the Archive

## Editor's Introduction

I. Safely tucked into a closet, my digital videotapes slowly began to erase themselves. The images, captured on MiniDV and made between 2000 and 2005, sloughed off their pixels, a discrete few at first and then in lines. Fearing the worst, I digitized the batch in early 2011 at a very low resolution. I did so hastily, intending to go back and capture higher resolution files when there was more time. However, as it does, life became busy, and I still hadn't gotten around to completing the project almost a year later. My negligence cost me. When I finally did return to the tapes, they were blank, recordings of negative black or blue video leader. The images were gone, and, as a proxy, I had only the roughest, grainiest copies backed up on a hard drive.

Although the disappeared images were mine, their loss also belonged to others. The tapes were home movies of my visits to the Myers family of Chester, NJ. I began visiting the Myers after I had befriended Jennifer, the daughter of Tad and Gay Myers, when we were both AFS exchange students in Panama in 1995. Jenn and I bonded when she rescued me from impending isolation in Cañazas, a mountainous town in Veraguas Province. My intended hosts, a missionary and his wife, were either missing or deceased upon my arrival, and I never did understand exactly what happened to them as I spoke so little Spanish. Except for the couple's housekeeper who stopped by in the afternoons, I was living alone, eating meals at the end of a long table and watching telenovelas on TV by myself until Jenn and our friend Mariah showed up.

After Panama, I would go to the Myers' house in the country outside of New York City most summers. Each visit, there was the usual cast of characters: Jenn, an artist and now university instructor; Gay, a travel writer and editor; Tad, a reporter and media executive; aunt Patti McCool, a school teacher and mosaic master; and innumerable other friends, relatives, and plenty of dogs. These were good times, and the Myers were some of the first adults that I knew who enjoyed a good story and a good laugh.

The videotapes were a prized possession, the container of memories from those days. In hindsight, I am upset with myself that I treated these valuable objects carelessly. But I was also blindly unaware that their destruction (erasure) would come so quickly and seemingly without cause. Did my closet contain some super-charged electromagnet that I was not aware of? Or was my naïve faith in the tapes to last more than a handful of years just that? Regardless, the vanishing of these images feels all the more sharp now that Tad, to whom this issue of *Spectator* is dedicated, has passed away. He died early last year (2012) from complications associated with Alzheimer's, and I never did get to say goodbye. Today, Tad's absence is compounded and returned to view as Patti struggles with late-stage cancer.

The images from these tapes can never be recreated or seen again in their fullness. Only a trace of a trace remains. This loss is the instigating force behind "Preserving the Immaterial: Digital Decay and the Archive"—a consideration of the complexities of archiving in the digital era and a reminder that the aura of the document is uniquely tied to its proclivity to disappear.

II. In full or in traces, the potential for loss plays an important role in the understanding of what archives are and what they do. If the idea of a “lost thing” conjures an absence previously filled by the material of the past, the struggle against this emptiness compels the very impulse to archive—to appraise, acquire, and preserve documents in a physical location so that history may be known and its evidence seen.

As many scholars have argued, the insistent return to the document enacts a fantasy of recapturing origins, the beginnings of power, authority, the system of law, and knowledge in all its privileged forms.<sup>1</sup> Most importantly, it speculates that the past can be sought out in some pure essence, in the quiet halls and stacks of archives where historians tread attempting to make “[direct] contact with the former reality itself...a ‘historical sensation.’”<sup>2</sup> But the longing to recover that which *is already gone* or *has already passed* is an impossible desire. To achieve a “lossless” rendition of history as interpreted through records would assume the reversal of several defining mechanisms of the archive, both practical and ideological, that have carved out losses, omissions, and silences en route.

*Spectator* draws itself to the awareness that the shadow aspects of the archive—loss, partiality, and ephemerality—intrinsically inform its function and deserve critical attention. A consideration that *to archive* means in part *to lose* is the focus of this issue. But this attention to loss must not be so wide-open as to consider it without direction. It is always tempting, for example, to look back at those calamitous incidents that serve as reminders of the frailty of documents: the collapse of the Historical Archive of Cologne in 2009 that decimated centuries’ worth of the 2,000 year old city’s records under rubble,<sup>3</sup> the US National Archives fire of 1973 that destroyed the Personnel Records Center in Overland, Missouri and tens of millions of military personnel files,<sup>4</sup> or the large scale destruction of the Iraq National Museum by looters after the fall of Saddam Hussein that resulted in the loss of or damage to over 15,000 artifacts, some of the oldest known evidence of human culture.<sup>5</sup> While spectacular, these losses draw us to traditional ideas about the archive and its role as both framer and protector of the

physical remnants of the past.

Instead, this issue pursues a new sense of archive in the 21<sup>st</sup> Century as it grapples with the expanding economy of digital information. Unlike the methods for preserving analog documents that have been honed over millennia, there is no deep precedence to look to regarding the management of digital records. As such, the processing, long-term storage, and distribution potential of archival digital data are highly unresolved issues. Digital archiving is at best a rapidly developing project, drawing on past practices and borrowing them forward when possible. However, there is not even a clear sense, as Charlotte Croft writes, about what the term “digital” precisely means in relation to the document as it is remade via a host of emergent technologies. Is the digital online or interactive, high-definition video or HDTV, digitally edited or projected films?<sup>6</sup> Even further, how does the archive contend with born-digital documents such as Internet sites or databases that are dynamic, always aggregating new information? Or, who in the future will need the archive anyway if corporations like Google are assuming a role as open-source, quasi-archives (distribution collections)? An inquiry into such uncertainties seems to lead straight down the rabbit hole. Ultimately, the fear is that if archives cannot contend with the glut of digital information today its future heritage may soon be lost, leading to the possibility of a “digital dark age.”<sup>7</sup>

The lack of either terminology to describe or standards to manage the excess of digital documents aside, there is a central paradox that plagues the archive at present. If, despite careful preservation, analog documents will slowly and inevitably succumb to physical decay, digital formats might seem an ideal alternative for long-term archival data storage. Digital code (binary sets of 1s and 0s) is theoretically eternal and could be maintained without loss, provided that the appropriate steps to process, store, and care for the data are taken. That being said, the preservation of digital information requires constant transcription (its movement at frequent intervals to newer data carriers) as file formats are superseded, operating systems are upgraded, applications become obsolete, websites are dismantled, components turn incompatible, and hard drives fall to pieces. And

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the more digital data is migrated, translated, and re-compressed into new formats, the more room there is for information to be lost, be it at the micro bit-level of preservation.<sup>8</sup> Any failure to contend with the instability of digital storage mediums, hardware obsolescence, and software obsolescence thus meets a terminal end—the definitive loss of information.

The common belief that digital data is safe so long as it is backed up according to the 3-2-1 rule (3 copies on 2 different formats with 1 copy saved off site) belies the fact that it is fundamentally unclear how long digital information can or will remain intact. What is certain is that its unique vulnerabilities do become more pertinent with age. Therefore, an exploration of digital archival data is needed as it opens to a form of loss—digital decay—that happens not spectacularly but more insidiously over time. *Spectator* takes up this work, asking questions about the integrity of digital material, its translation into archival substance, and, ultimately, its tenability as a durable site of knowledge. *How ought the immaterial be archived so as to maintain the integrity of the document?*

This inquiry will emphasize *Spectator's* unique focus on photographic images, moving and still, and visual images culture as it deals with the uncertainty of its digital present and future. If current archival discourses on digital preservation are still largely focused on paper-based works “because those are the media with which librarians and archivists traditionally identify,”<sup>9</sup> photographic images are already well positioned to help us consider the digital's relationship to materiality and indexicality, questions that have had profound impact on the legacy of screen-based arts and the understanding of what constitutes visible evidence. According to researchers at UCLA, a new digital format is currently developed every eighteen months,<sup>10</sup> making the point that digital images must be migrated about every year and a half, lest they become inaccessible. This is a relatively short time compared to, say, the stability of 35mm celluloid that can last decades, silver halide photographic film that has a shelf-life of 100 years plus, or older data substrates such as pigment on paper whose longevity can extend into thousands of years.<sup>11</sup>

While the threat of loss may feel overwhelming, the quandary of archiving in the digital era does not mean gloom-and-doom unequivocally. Many productive ideas about the changing nature of digital

preservation, storage, and access are now being offered. On the preservation side, for example, scientists have been working to propose hybrid methods of archival storage, those that would join digital encoding with more time-tested and well-understood mediums such as microfilm. The storing of digital information in an analog way, printed onto microfilm for example, should strengthen the stability of the data by eliminating the need for costly migrations, hardware and software to decode the data, or specialized machines to read or see what is recorded.<sup>12</sup>

Archivists and scholars are likewise working the theoretical edge, calling for new methods of appraisal and acquisition that accept the subjectivity and complexity of archival work. Certainly, the Internet is opening new distribution channels for ephemeral documents, especially those types of non-theatrical moving images such as found footage, experimental works, user-generated videos, scientific films, or pedagogical films, that have been previously relegated to individual collections and storage bins. As ephemerality is forced ever more widely into public consciousness, a broad cultural rethink of what constitutes archival value is underway. This emergence informs Timothy Wisniewski's argument that ephemeral moving images are not only gaining new archival acceptance but redefining the very criteria of evidence previously based on empirical measurements (authenticity, uniqueness, documentation, and quality), measurements that cannot be applied across the board to images or documents that record “different actions.”<sup>13</sup> The argument follows that as new standards for appraising a wider range of evidence creep into the archival lexicon, there also exists a greater range of materials for archivists to search through and select from. In this way, the archivist is returned to an ever more central position in the choosing of what will become kept and what will disappear. These fields of study are just a mere few redefining the methods of archival practice, and the essays in this issue point to and explore those questions that are of vital concern to the jurisdiction of the archive in the 21st Century.

Most provocative, perhaps, is *Spectator's* subsequent look at the emerging role of the personal or independent “archive”—a digital collection or project that contains a catalog of digitized documents and/or images that can be accessed by others but, according to Eric Hoyt in this issue, meets few of

“the preservation and material uniqueness standards of an archive in the traditional sense of the word.” What an archive means culturally today is being recontextualized by generations of computer literate users who are drawing on widely available digital technologies to make documents,<sup>14</sup> turning to online frameworks (blogs, websites, social media platforms) and other connected repositories (dSPACE, Fedora, USC’s Scalar) for data dissemination and storage. As traditional distinctions between an actively available distribution collection and an archive that restricts access for the sake of preservation erode (isn’t YouTube an archive?), critics make the point that the archive must respond by adapting what it actually does. This is the moment, Rick Prelinger writes, for archives to allow decentralism and DIY ethics into its hermetic culture. He calls for the reorganization of timeworn attitudes about access and copyright in particular, urging archives to become cultural leaders in the “exchange of images and sounds, not simply a wholesale repository relying on presenters, producers, and scholars to expose its treasures.”<sup>15</sup>

This progressive view also highlights the need to think through the changing nature of what can or ought be collected in the digital era. Who can forget the national interest in US President Barak Obama’s unwillingness to give up his Blackberry—what was flippantly referred to in the mainstream media as the presidential “CrackBerry”—when he first assumed office in 2009? If the story centered around whether or not Obama’s phone-based texts and emails would become subject to the Presidential Records Act, a law that requires the National Archives to accrue all records of the Executive Branch of government, both public and private, it foregrounded how porous the archival method has become as a greater diversity of documents floods the media and communication landscape. Although it was reported that the President was ultimately allowed to keep his Blackberry for private communication with senior staffers and a few friends,<sup>16</sup> the news story particularized fears about the archive’s inability to maintain both the security of digital documents and the conformity of their collection. In the background also lurked the shadowy presence of the archivist, now thrust into the limelight, whose role as the knowing but silent and unseen keeper of documents feels increasingly misunderstood in society. Perhaps it is harder to trust an archivist or an institution that

would strip the most conspicuous citizen of his right to text, simply because what to do with these highly personal and informal communiqués couldn’t be decided upon. After all, whom should the citizenry look to for guidance as we attempt to manage the streams of digital information that now clutter our daily lives?

The question, albeit it a cheeky one, implicates something of a bottom-line. From its inception, the archive has always had to contend with absence, be it the loss of information or control over information, as an eminent force at work on the preservation of the past. As the problems of how and whose responsibility it is to maintain digital documents over time are parsed, what returns are long-standing debates about the nature and duty of the archive. Is the archive a physical location (a place of storage where documents are kept), a social institution (the custodian of collective memory), a metaphor (the palace of remembering where beginnings are said to be found), or a cultural producer (a leader in the integration of digital technologies into our daily lives)? Ultimately, where the digital document, not a physical but an immaterial trace of a thing, fits therein is still up for grabs.

The impulse to archive as a means to remember history or one’s place in the world through the evidence of the past is not whatsoever new. It is the methods to do so that are changing. The description of the root from which “archive” comes—the Greek word *arkhe*, meaning “beginning” or “origin”—is itself an evolving concept that critics argue “represents the now of whatever kind of power is being exercised, anywhere, in any place or time.”<sup>17</sup> Be it on crumbling paper, encoded as 0s and 1s onto hardware, or lofted up into “the cloud,” the document is now as it always has been, tenuous and predicated on loss. It is we, those who make and think about the document in its new digital incarnations, that must endeavor to come to terms with its quicksilver nature, its ever-changing limits and potentials. If the compulsion to collect documents, digital or not, is meant to repel oblivion, it is a practice that is honed repeatedly and across time toward a mastery that will not come. Not now. Not ever. But with every utterance of the mantra (*preserve* and *protect*), the iteration changes, and the intention is renewed in the moment and then forward. To acknowledge presence and absence as one, and for always, is to be in a state of grace: *I once was lost but now am found...*

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and back around.

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### End Notes

- 1 See Jacques Derrida, *Archive Fever: A Freudian Impression*, trans. Eric Prenowitz (Chicago: University of Chicago Press, 1995)
- 2 Jo Tollebeek, "'Turn'd to Dust and Tears': Revisiting the Archive," *History and Theory* 43, No. 2 (May 2004): 240.
- 3 Andrew Curry, "History in Ruins: Archive Collapse Disaster for Historians," *Die Spiegel*, March 4, 2009.
- 4 Walter W. Stender and Evans Walker, "The National Personnel Records Fire: A Study in Disaster," *The American Archivist* 37, No. 4 (October 1974): 521-549.
- 5 Lawrence Rothfield, *The Rape of Mesopotamia: Behind the Looting of the Iraq Museum* (Chicago: University of Chicago Press, 2009)
- 6 Charlotte Crofts, "Digital Decay," *The Moving Image* 8, No. 2 (Fall 2008): 22-23.
- 7 Kurt D. Bollacker, "Avoiding a Digital Dark Age," *American Scientist* 98, No. 2 (March-April 2010): 109.
- 8 Steffan W. Schilke, "Long-term Archiving of Digital Data on Microfilm," *International Journal of Electronic Governance* 3, No. 3 (2010): 238.
- 9 Michael Seadle, "Archiving in the Networked World: Betting on the Future," *Library Hi-Tech* 27, No. 2 (2009): 324.
- 10 Julia Knight, "Archiving, Distributing, and Experimental Moving Images Histories," *The Moving Image: The Journal of the Association of Moving Image Archivists* 12, No. 1 (Spring 2012): 80.
- 11 Bollacker, 107.
- 12 See C. Normand, R. Gschwind, and P. Fornaro, "Digital Images for 'Eternity': Color Microfilm as Archival Medium," Proceedings: *The International Society for Optical Engineering* 6493 (2007): 649307-1—649307-9.
- 13 Timothy Wisniewski, "Framers of the Kept: Against the Grain Appraisal of Ephemeral Moving Images," *The Moving Image* 7, No. 2 (Fall 2007): 6.
- 14 See Richard J. Cox, *Personal Archives and a New Archival Calling: Readings, Reflections, and Ruminations* (Duluth, MN: Litwin Books, 2008)
- 15 Rick Prelinger, "Archives and Access in the 21<sup>st</sup> Century," *Cinema Journal* 46, No. 3 (Spring, 2007): 117-118.
- 16 Suzanne Choney, "Obama Gets to Keep His Blackberry," <http://www.NBCnews.com>, January 22, 2009.
- 17 Carolyn Steedman, *Dust: The Archive and Cultural History* (New Brunswick: Rutgers University Press, 2001), 1.