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Breakdown as Method: Screenshots for Dying Worlds

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Abstract

Drawing on John Durham Peters' theory of (mis)communication and other studies of precarious infrastructure (Hicks, 2020; Star, 1999; Pow, 2021; Tsing, 2015), in this article, I consider mortality or finitude as a site of communication breakdown, focusing on the problem of using digital platforms to achieve posterity. Providing an overview of my long-term ethnographic, historical, and web-based research on digital death care practices, I highlight some of the techniques that constitute breakdown as a method of scholarly inquiry. I present screenshots as mourning objects and breakdown research tools. The screenshot represents and captures a distinct point of view and provides material evidence for slippery, ephemeral communications even as the screenshot, as a media object, is subject to decay. Drawing on temporally-oriented or ethnographic approaches to studying dynamic social media cultures (Bonilla, 2015; Christin, 2020; Karpf, 2012; Seaver, 2017) in addition to the work of John Durham Peters, I position breakdown as a method befitting fragile digital social worlds. I argue that death, through the practice of screenshotting, provides a framework for grasping the transcendent capacities and material limits of technologies.

Keywords

Mortality, death, infrastructure, platforms, methodology, temporality, screenshot

My first job after graduating from college entailed digitizing Mesoamerican archaeological fieldnotes. For a year of my life, a scratched CD copy of *69 Love Songs* by The Magnetic Fields was my only companion while I scanned thousands of documents. Encompassing dozens of excavation sites in Honduras and Guatemala over the course of thirty years, dirt-covered, handwritten papers about pottery shards and other artifacts were stuffed in filing cabinets. Along with flattening out and

scanning crumpled pages before organizing the digital versions of this paper-based data, my job also involved transferring old files from Lotus into Excel. To my horror, some files were located on an early 1990s Apple PowerBook. The logic behind my repetitive, often boring labor was that cleaned up digital versions of these materials would be more useful to future students. In our minds, digitization was equivalent to preservation. Many of the archaeological sites no longer existed in the physical world. The stolen land the sites were on had been sold and developed, and researchers' fieldnotes and other material traces were all that remained of them. The problem was that *maintaining* the digital records of these past research trips turned out to be an arduous task. Files had to be constantly updated to remain the same, and someone had to do that updating. As Wendy Hui Kyong Chun puts it, digital media are contingent on an "enduring ephemeral, creating unforeseen degenerative links between humans and machines" (2008: 150). Archaeologists' study of deep human history collided with the planned obsolescence of networked technologies.

Unlike archaeologists, digital media scholars are trained to focus on 'new' technologies and emergent cultural practices. This forever nowness becomes even trickier as the internet ages; the web of 1994 looks almost nothing like the web of 2004, let alone 2021 (Karpf, 2020). Even a singular digital object like a Facebook profile looks different over time, depending on interface changes, added features, and collected interactions over the years. The 'digital' collapses so many different technologies, genres, and time periods. However imprecisely, web periodization is often narrativized as a shift from Web 1.0 to the interactivity of Web 2.0 and platformization, as connection-as-data became of greater financial value to advertisers and corporations (van Dijck, 2013; Helmond, 2015). Early electronic communities and social network sites yielded ground to platforms, just as younger generations have shifted from LiveJournal, MySpace, and Facebook to TikTok and Snapchat. In an ethnographic study of the relentless digital now, fieldsites seem to disappear almost as quickly as they are formed. Real-time communications speed past in a monstrously endless flow (Lovink, 2010). Individual posts may be deleted or URLs changed, while entire platforms might disappear. As opposed to archaeological sites, which are at least in theory static at the time of excavation, studying living humans and their things means pinning down something constantly in motion and, when it comes to social worlds connected to digital technologies, always on the precipice of obsolescence. For

researchers, the endless flow creates a practical problem. How do you preserve the sensuous experience of real-time communications? But there is something to be said for imperfectly capturing something you know is bound to end.

Here, I consider mortality or finitude as a site of communication breakdown, focusing on the problem of using commercial platforms to achieve posterity. The mythology of the ‘digital’ is imbued with a sense of the sublime (Mosco, 2004); gesturing toward the eternal, at the same time the digital lifeworld is a point of existential vulnerability (Lagerkvist, 2017). There is a cultural fantasy that, through data, bodies can be disentangled from minds, perhaps allowing people to be uploaded and kept alive forever through computers (Hayles, 1999). Like electronic media forms in the nineteenth century, the separation of communication from physical presence makes communion with the spiritual realm appear plausible (Peters, 1999). But like the telegraph before it, the internet is contingent upon material infrastructures and earthly bodies; the Spiritual Telegraph, after all, relied on women to act as spirit mediums and created new spaces for understanding race, gender, sexuality, and the public sphere (Braude, 1989; McGarry, 2008; Sconce, 2000). Similarly, as early cyber-feminists showed, embodied identity and physical media, e.g. circuit boards, were never removed from virtual experiences (Nakamura, 1995; Plant, 1997; Senft, 1996).

The screenshot is a device for preserving the materiality of passing digital experiences, slowing down and momentarily capturing real-time flow while pointing to the existential fragility of humans and their technologies. Through an overview of my long-term ethnographic, historical, and web-based research on digital death care practices, I highlight some of the techniques that inform breakdown as a method of scholarly inquiry. While conducting research on digital posterity—including websites that promised to maintain people’s digital belongings for eternity—many of the platforms, startup companies, and links that constituted my research sites are now gone. In some cases, all that is left of them are my haphazard screenshots and scattered captures from the Internet Archive’s Wayback Machine. Rather than posing a methodological problem, breakdown is a productive starting point for approaching unstable online worlds and related changing social norms. I present the screenshot as, simultaneously, both a mourning object and a research tool.

Screenshots are imperfect vessels for preservation and thus contain a close relationship to other digital afterlives. Like other research materials, such as recorded interviews or published fieldnotes, screenshots can haunt subjects after the fact and resurface in other contexts. But screenshots also break down, calling attention to how platform capitalism's promises of computational immortality are largely a ruse: nothing lasts forever, even the practices and infrastructures associated with digital posterity.

As John Durham Peters famously argued in *Speaking into the Air*, communication is defined by its failures: "Miscommunication is the scandal that motivates the very concept of communication in the first place" (1999: 9). Failed communication is a running joke when it comes to digital afterlives; the ephemeral commercial web is hardly the right setting for eternity. People's intimate memories and hopes for technologically extended lifespans are tied to disappointingly fragile and finite technologies, some of which disappear at a rapid clip. Secular transcendence, with its ambitions of soul-to-soul communication through an alchemy of science and technology, spirituality, religion, and platform infrastructures, reflects how breakdown—of humans, objects, and their fragile relationships—will always get in the way of perfect communion. Death provides a framework for grasping the capacities and limits of material technologies and screenshots are a way of acknowledging this tendency toward decay.

First, I present a theory of breakdown as method, building on work by John Durham Peters, putting his theory of imperfect communication into conversation with feminist scholars of infrastructural breakdown (Hicks, 2020; Star, 1999; Pow, 2021; Tsing, 2015). Peters' theory of (mis)communication is intimately related to death itself. His embrace of mortality and the fundamentally physical attributes of ghostly communication is what makes even his early work foundational to studies of infrastructure. Then, I present screenshots as mourning objects and research tools. The screenshot represents and captures a distinct point of view and provides material evidence for slippery, ephemeral communications. Finally, I highlight some instances of breakdown and death in my own research, as newness and real-time flows become historical artifacts laden with pathos and nostalgia. What I call *platform temporality* impacts not only lived experiences of social media, but has repercussions on how network cultures can be ethically studied, archived, and analyzed. Drawing on

temporally-oriented or ethnographic approaches to studying dynamic social media cultures (Bonilla, 2015; Christin, 2020; Karpf, 2012, 2020; Seaver, 2017), I position breakdown as a method that helps mitigate against extractive approaches to qualitative studies of social media cultures. By following Peters and embracing what exceeds capture and what falls apart, digital field sites, including gathered screenshots, are meant to break down and disappear.

The End of Things: From Dead Letters to E-Waste

In this section, I consider breakdown as a starting point for approaching media, whether digital or not, and the material remains of the most apparently cloud-based information technologies. Breakdown makes infrastructures visible (Star, 1999). Moments of crisis, such as the COVID-19 pandemic, can make quietly humming infrastructures more obvious. The vast network of the United States Postal Service, which seamlessly delivers through snow and rain, was made discernible through its lags, thanks to the dual hit of the Trump Administration's anti-democratic scheming and supply chain snags. Upon systemic breakdown, mundane mail became a sudden topic of conversation, or even a political rallying cry against fascism. Meanwhile, in a related example of breakdown, state unemployment agencies blamed their errors on their systems' reliance on COBOL, a supposedly obsolete 1950s programming language (Hicks, 2020). In fact, COBOL was built to last, whereas the glitches were a product of the website, which was written in Java, a much newer programming language (Hicks, 2020). But the crisis made COBOL visible and called attention to the need for maintenance and care when it comes to computing technologies. Like other kinds of infrastructures and defunct media forms, digital networks don't exactly disappear without a trace. Rather, the work they do becomes most visible precisely through glitches and 404 error messages. For this reason, Whit Pow (2021) calls for centering the ephemeral, glitchy aspects of trans computing and gaming history: "The glitch itself poses a momentary experience of undoing, unmending: the artifacts that appear on-screen show us the breakdown of these systems and a fleeting awareness of the way we are imbricated, or unable to be imbricated, within its systems and structures" (203). How do you write a history of who or what hasn't been saved? Glitches gesture toward this problem with the media archaeological record.

Death is a particularly useful analytic for thinking about glitches or infrastructural breakdown, the shadowy traces of relationships, people, or objects that once were. In *Speaking into the Air*, John Durham Peters showcases failures to send and material surpluses, or refuse, in apparently seamless modes of communication. He describes the strange scene of the nineteenth century Dead Letter Office of the United States Postal Service, which handled letters that could not be delivered, either because the address was invalid or the addressee was unreachable (or dead). Postal workers mined undeliverable envelopes for valuables, but a lock of hair—a Victorian symbol of mourning—was not considered important enough to return to the original sender. His attention to the hair as leftover or symbol of failed communication is evocative. In Peters’ theory of communication, whether that entails communication with the dead or the living, there is a physical surplus: “The Dead Letter Office serves as a vast crematorium of the dead and their personal effects” and, as he goes on to argue, “deals with the materiality of communication, not its supposed spirituality. It is the dump for everything that misfires. The need for it to exist at all is an everlasting monument to the fact that communication cannot escape embodiment and there is no such thing as a pure sign on the model of angel” (Peters, 1999: 9). The Dead Letter Office, as a representation of infrastructural failure and bodily decay, embodies communication itself.

Rather than fetishizing materiality over angels, however, Peters delicately shows how notions of value, agency, and memory are assigned to the material aspects of communication. Within the context of media, including writing, telegraphy, photography, and recorded sound, there is a ghostly element because of media’s “common ability to spirit voice, image, and word across vast distances without death or decay” (Peters, 1999: 75). Media jumble together communication at a distance and communication with the dead (Peters, 1999: 249). Possessions of the dead and the living become intermixed, all of which work together to make death seem less final. But with the dream of perfect communion through new media forms, there are also new mishaps. Sometimes wires go down, messages are indecipherable, and letters, whether paper-based or electronic, never reach their intended recipient (Peters, 1999: 108).

Bodies are both an impediment to perfect communion and constitutive of that very same connection. As Peters argues, “the body is not a vehicle to be cast off, it is in part the homeland to which we are traveling” (1999: 65). Building upon the new medium of telegraphy and its ability to instantaneously transmit messages across a great distance, the Spiritual Telegraph required the bodies of women to act as mediums, and notions of disembodied communication with the dead intersected with Victorian theories of gynecology; women spirit mediums secreted the material surplus of their ghostly interlocutors as ectoplasm (Peters, 1999: 98-99). Spirit photographs were not just for spiritualist believers, but were physical commodities that non-believers also circulated as spectacles. They blurred the lines between fact and fiction, science and religion, providing physical evidence of ongoing yet otherwise invisible bonds with the dead (Natale, 2012). In the Victorian age, mourning entailed a connection to the materiality of the corpse through spirit and postmortem photographs—which were worn in lockets close to the body, displayed in homes, and circulated among loved ones—as well as mourning jewelry that affixed a braid of hair or photograph of the deceased person to the mourner. The mourner and the dead were conjoined *physically*, not just spiritually (Batchen, 2004). Finitude, breakdown, and mortality are central in Peters’ theory of communication, as is the importance of haptics, of touch and sensory experience. Given our own individual mortality, and the fact that there is a limit to touch and intimacy, “presence becomes the closest thing there is to a guarantee of a bridge across the chasm. In this we directly face the holiness and wretchedness of our finitude” (Peters, 1999: 271). Peters refers to Victorian mourning practices that embraced interactions with corpses as well as spirits, acknowledging the realities of death and decay. In many respects, his argument is a rebuttal to the denial and sequestering of contemporary death, or the death denial and hubris exhibited in techno-futurist dreams of computational immortality.

Through his emphasis on the material culture of mourning, Peters’ Dead Letter Office example gets not only at the fundamental relationship between human mortality and mediation, but also the mortality and afterlives (or alterlives) of objects in the world. Objects gain or lose value as they are circulated. Some are forgotten or castoff, while others are refurbished, repurposed, or become heirlooms. Planned obsolescence means that what is left behind by decaying media formats is junk, trash, and e-waste, forms of residual media (Acland, 2006), and, relatedly, in his later work, Peters

explicitly examines the elemental origins of cloud-based technologies; media themselves are infrastructures that resist permanence and immutability (Peters, 2015). Anticolonial scholar Max Liboiron (2021) reminds us that pollution and plastics are situated in ongoing maintenance relationships to both colonial and anticolonial Land relations (19). Media refuse cannot be disentangled from larger environmental, elemental, and social relationships.

Aside from obvious ecological, colonialist ramifications of capitalist production, particularly in the Global South, the remains left behind by dead hardware are also a problem for people who inherit them. This is the subject of much of my own research. The maintenance labor required by networked systems is a major theme of my work on digital death care practices, from managing a digital estate after gathering passwords and account information to navigating a slowly decaying inherited smart home. Content creators depend on the backend labor of digital caregivers and a network of human and non-human entities, from specific operating systems and devices to server farms, to keep digital heirlooms alive across generations. Updating formats, and keeping those electronic records searchable, usable, and accessible, requires a massive amount of labor, energy, and time. This is a problem for archivists and institutions, but also for individuals who might want to preserve the digital belongings of their dead kin.

There is a tension within the digital format, which continues in this vein of disembodied spiritual communication and, at the same time, is ephemeral because of its own material nature. Through the years, I have encountered many chatbot companies that promise to emulate you or a loved one after physiological death. Peters refers to a kind of Turing test that nineteenth century spiritualists performed when the dead spoke through them: Who is the real human and who is the ghost? Who or what is really speaking? (Peters, 1999: 194). The same question can be asked of algorithm-controlled memorial 'AI', which attempt to simulate a human personality, using past data and behaviors to speculate on a future postmortem existence. One such company, Life Naut, which is backed by the transhumanist organization Terasem, will purportedly upload your mind file into a bio file once technology makes it possible to do so. On their website's main page, their chatbot prototype doesn't quite hack it as a human being [See Figure 1]. Its conversation style is lacking and the site itself relies on

outmoded Flash software. According to Peters, finitude itself contains its own fleshly excess that “escapes simulation. It is human frailty, rather than rationality, that machines have difficulty mimicking” (Peters, 1999: 137).

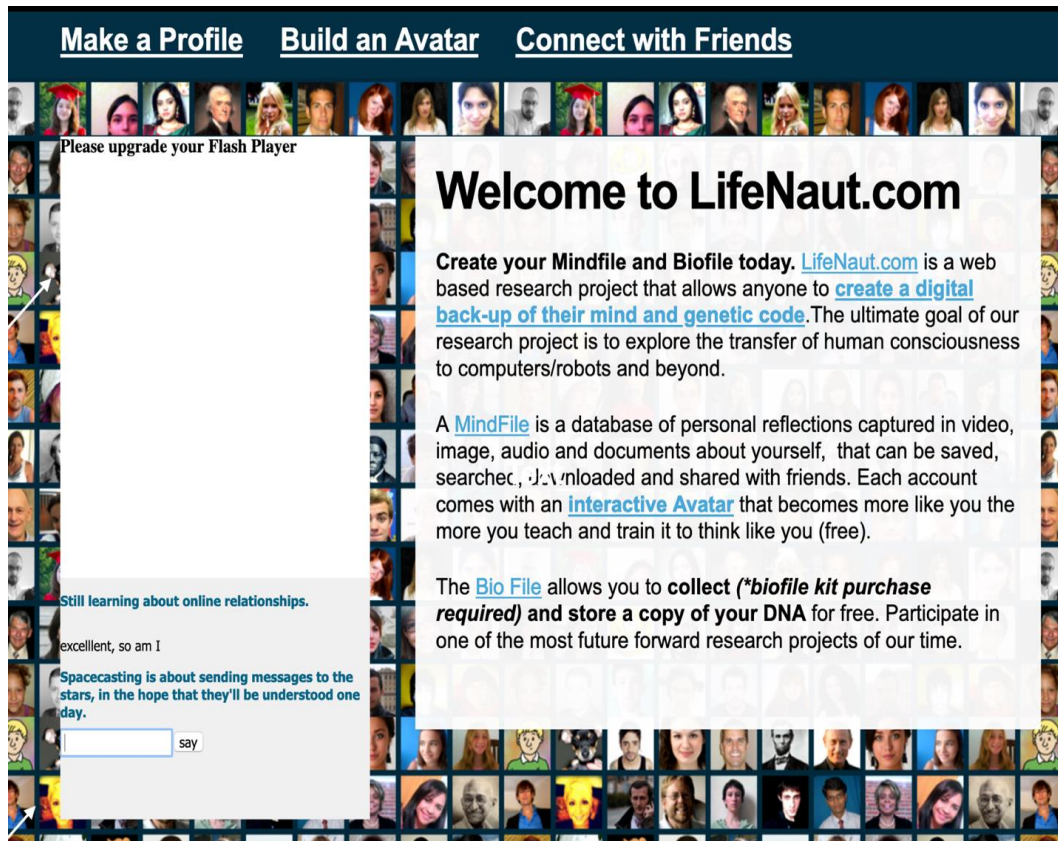


Figure 1: Life Naut, a transhumanist digital afterlife startup. Notice the odd chat conversation on the left-hand side and the Flash Player error, which made the avatar not function properly. Screenshot by author.

But devices, formats, and websites also die, just as we frail humans do. Despite the fantasy of an automated home that can run itself in perpetuity or a website that can survive for centuries, planned obsolescence means these systems will most certainly decay and die. As I found through my own conversations with people tasked with maintaining the digital belongings of dead loved ones, there is a stark difference between what people think they want, or what they expect others to do, and the reality of what it means to help technologies persist over time. The mortality of both people and technology means that these systems will ultimately stop working. A smart home, once inherited, might leave you sitting alone in the dark with a pesky alarm that can't be turned off, making you feel as if your dead father is haunting you through his smart system protocols. Infrastructures are invisible until a moment of acute breakdown:

“the server is down, the bridge washes out, there is a power blackout” (Star, 1999: 382). Death exposes the networks of people and things behind singular social media presences, such as the Twitter account of a public figure that continues to tweet long after his death, thanks to the labor of social media teams and kin members. Because they quietly support other tasks, focusing on infrastructures helps sort out whose contributions are valued and whose labor is overlooked.

Taking up many of the same themes as Peters, and publishing in the same year, Susan Leigh Star offers a more methodological mode of inquiry: How should researchers go about performing an ethnography of infrastructure, particularly when it comes to digital communications? She calls for an attention to boring, invisible, or undervalued forms of work, such as nursing and other forms of care. Digital records present a treasure trove of mundane information, ready-made accounts of other people’s conversations and lives. Star compares online texts to ethnographic fieldnotes: “It is an ironic and tempting moment—we have the promise of a complete transcript of interactions, almost ready-made ‘fieldnotes’ in the form of transaction log and archives of e-mail discussions” (Star, 1999: 374). Yet, as she observes, this amount of information can be overwhelming and difficult to analyze. Star also raises the ethical issues behind studying human action at a distance online, or the actions of people you never meet. Reproducing tweets or other textual elements from one online context and amplifying them, or circulating them to readerships outside of their intended category—such as when journalists use uncontextualized tweets in their reporting (Clark, 2020) or when academics use Instagram hashtags or posts in their textual analysis—can pose an ethical problem as well, attracting unwanted attention to people who were posting for other purposes and audiences. Online transcripts or collected interactions are also only one part of a larger story; often, digital ethnographers combine some degree of on-site visits, interviews, or other qualitative methods alongside their immersive online experiences.

In an example of infrastructural breakdown ethnography, anthropologist Anna Tsing examines matsutake mushrooms as a form of scavenge accumulation, an asset for the end of the world under late capitalism and ongoing colonialist ecological destruction. For Tsing, precarity, the indeterminacy of breakdown and survival, offers a way forward. She takes precarity itself as her starting point (Tsing, 2015: 20). In studying

quickly decaying digital platforms and passing communications, attention to precarity is even more vital. Rather than framing online behaviors and social norms as static or permanent, it helps to situate them within the particular time and place in which they were produced. Ethnographic interviews and observations can turn into oral histories and historical records as interlocutors die and platforms or particular cultural practices associated with platforms disappear. Research the present with an eye toward both precarity and posterity. In the next section, I argue that the screenshot is a suitable media object and tool for such precarious research.

Securing the Shadow: Screenshots as Memory

*“Secure the Shadow, ‘Ere the Substance Fade
Let Nature imitate what Nature made”*
—19th century daguerreotype advertisement

As a methodological tool of precarious worlds, screenshotting marks a larger shift from transmission to recording as a means of overcoming distance to a means of overcoming death itself (Peters, 1999: 144). Photography, telegraphy and especially phonography allowed the dead to speak to the living (Peters, 1999: 138). As Peters puts it, “Media of transmission allow crosscuts through space, but recording media allow jump cuts through time. The sentence of death for sound, image, and experience had been commuted. Speech and action could live beyond their human origins. In short, recording media made the afterlife of the dead possible in a new way” (1999: 144). Similarly, capturing a fleeting webpage in a screenshot, like many other recording media technologies, gives its creator the *feeling* of having overcome death in a digital environment. The screenshot is part of the same lineage as spirit photography, a way of capturing the excess of existence, the remains of something that is gone almost as soon as it materializes; it is a record of a ghostly presence.

Within the context of capturing real-time experiences of digital media, screenshots can become mourning objects. Like the photograph and its uncanny ability to capture life-in-death, existing as an emulation of the referent and proclaiming ‘that-has-been’, the screenshot contains its own internal melancholy, which can trigger the observer through what Barthes famously called *punctum* (Barthes, 1981). Through capture, the subject becomes an object. A screenshot is the user’s attempt to capture a passing

interaction, knowing full well that the context and original hyperlinks may disappear after a short time. A screenshot takes on new meaning after a person or platform dies, or even when its aesthetics are jarringly out of time, like screenshots from earlier versions of frequently visited websites. In this section, I account for different theories of the screenshot in relation to the screenshot's utility as a methodological tool. Screenshots are part of the broader media history of containment, preservation, and communication with the dead, as theorized by John Durham Peters. They act as material traces of unretrievable moments.

As Peters argues, a medium is not merely the connections it creates: a medium also creates the potential for new forms of breakdown. What forms of breakdown, failure, glitch, misdirection, or loss does the screenshot, as a specific way of framing the world, make possible? What is lost, or left out of the frame, when the screenshot is taken? What kinds of ambient, embodied labor go into the taking, storing, and collation of screenshots?

After death, everyday practical objects can become transformed through mourning work. For instance, a simple wooden spoon can take on new significance after a grandmother's death, shifting from practical kitchen utensil to mourning object (Hallam and Hockey, 2001). Media accounting is not a new practice and items like scrapbooks and diaries have long persisted after people's deaths, becoming shared records of their lives (Humphreys, 2018). But increasingly, corporate platforms intervene in people's everyday communications, so that their personal digital archives are dependent on the policy decisions and terms and conditions of Facebook, Instagram, Twitter, and other platforms. Facebook is a center for personal digital archiving, especially for the dead (Acker and Brubaker, 2013: 7). At the end of 2020, Twitter announced that it would delete inactive accounts, causing a great upset because of the many dead users who were memorialized through the platform. Because of the untrustworthiness of digital platforms, there have been some attempts at turning digital memory objects into physical heirlooms, for example printing digital photographs and pasting them into a scrapbook. Screenshots can provide a similar material remnant of communicative flow. Like the scattered objects of the Dead Letter Office, they reflect lived, embodied experiences and can become memorials to sites, virtual worlds, digital practices, and people that no longer exist.

Screenshots are not exactly stable, either. They also decay over time through generation loss. Images lose quality when they are shared. In a 2015 project titled “I Am Sitting In Stagram”, artist Pete Ashton posted a photograph to Instagram, snapped a screenshot of it, and then reposted the screenshot to Instagram once more. He performed this action 90 times in a row. By the end, the image degraded and turned into unrecognizable noise.¹ Screenshots speak to the transcendent capacities of media at the same time they are defined by precarity. Compression glitches and other moments of disconnection point to the materiality, and thus the precarity, of file formats (Denson, 2020: 156). Screenshots degrade over time and even at their best, capture only partial information. They are messy, incomplete, and contain various kinds of noise, e.g. information outside of the intended frame. They must be catalogued, renamed, and archived in order to be of future use, or else they become clutter on a computer desktop.

Media theorist Paul Frosh presents screenshots as a form of poetic witnessing, connecting their technical and communicative uses to the work of John Durham Peters; to take a screenshot requires embodied labor through the act of “grabbing” (Frosh, 2019: 216). Frosh describes the screenshot as a form of documentation, lending fixity to something that is mutable, and turning digital ephemera into a “solid artifact” that can be handled (Frosh, 2019: 205). In reference to Peters, Frosh positions screenshotting as a form of embodied witnessing that transforms “experience into discourse for others who were not present either in space or time at an event” (2019: 229), giving the sense of a shared time and space. Absence—because of distance, death, or loss—is essential for this witnessing to take place:

Witnessing, then, makes non-identity an ontological constant of the witnessed world, a fundamental structure of being shared and potentially recognized by all who inhabit that world. Such witnessable worlds thereby resemble the temporal and spatial structures of physical existence. It is because of this non-identity that witnessing works as a communicative practice linking, imperfectly and partially, diverse positions within it (Frosh, 2019: 229-230).

As an example of screenshotting as witnessing, Frosh presents a screenshot of the final WhatsApp message of a dead Israeli soldier killed in action, which was later reproduced

in the Israeli press. Like a photograph, the screenshot takes on different significance, and carries different political messages, after a referent's death.

In this way, despite their own precarity, screenshots are one tool that digital ethnographers can use as a form of fieldnote. They capture not only the action happening on screen, preserving some information for future use, but they also preserve the ethnographer's own point of view. You, the observer, are the one determining which tweets or images are worthy of preservation, and which might require a moment of later reflection and analysis.

Screenshots capture life on screen as it happens, reflecting the aesthetic and sensual dimensions of computing cultures. Jacob Gaboury traces the practice back to the 1960s. Moving away from the computer hardware or camera/printer itself, the screenshot has become a software operation and habitual action, a taken for granted aspect of life online. Mobile screenshots "allow for the capture and circulation of the intimate ways we use and are used by our computational devices" (Gaboury, 2019). Screenshots can be used as evidence or an indexical marker. A person can be haunted by screenshots long after deleting an original post, and screenshots can in that way constitute a more autonomous archive. Your personal screenshot can outlive the post, which may be deleted, or even the platform on which it lived. But screenshots also carry the mark of their creator. They preserve our own attention to particular moments in time and communicate our experiences to others when we share them. Screenshots constitute fragments of life that might be valuable at a later point; they capture a moment in real-time but are also speculative, much like photographs, in that they hint at an inevitable future death.

Screenshots, in offering a window into the taker's point of view, are personal and subjective. Screenshots are also removed from an image's original metadata and thus are not always attributed to a particular author. The act of screenshotting, and then naming the new file, places an image or text into a new context altogether. As DIY objects, screenshots are also messy, often low resolution and imperfect around the edges (Pendergrast, 2021). Sometimes they contain traces of other elements and are slightly off-center. After websites or posts disappear or change, screenshots might be the only material trace of them left, but they are often too gritty to be printed in journals and books (Pendergrast, 2021). Keeping track of screenshots as they

proliferate requires a great deal of organizing labor on the part of the screenshot taker. Files must be properly named and screenshots transferred from cluttered desktops to other files or, eventually, other devices or cloud-based storage. It is hard to know which, if any, screenshots will be of value down the road.

Web ephemerality heightens the stakes of DIY screenshots. In one sense, screenshots do the work of preservation that many platforms and systems fail to do. Screenshots reflect a point of view: they contain telling elements, like showing someone's phone battery at 2%, a person's signal bars, or the phone's clock (McNeil, 2014). As the web has changed, in terms of its affordances and aesthetics, screenshots might have provided a window into past web experiences that are now gone. The early web was intentionally ephemeral, whereas platformization has created a sense that life online should be preserved, even if it rarely is fully preserved (McNeil, 2014). There are often tensions between ephemerality and posterity when it comes to digital platforms. Despite Snapchat's entire concept being built upon the notion of ephemerality, Snapchat users pushed back against the company's policies so they could maintain more robust records of their Snaps, particularly when they became memorials to dead users (Humphreys, 2018). Meanwhile, Instagram and Twitter have released options like Stories and Fleets that provide a more ephemeral form of communication. In Vanish Mode, Facebook messages are now also capable of disappearing after a set amount of time. Given their general instability, screenshots can provide more reliable record of these communications. Screenshots are a means of accessing and making material something that is fleeting.

For these reasons, some scholars have discussed the ways that screenshots can be used as a methodological tool in digital research contexts. Media and journalism scholar Meredith Clark writes about the screenshot in the digital humanities, positioning screenshots against APIs or other default methods that many digital researchers use to glean information about users and their behaviors. Screenshots provide a kind of positionality, not only of the researcher, but of the textual quote or image at hand. They contain other symbols that provide deeper context, going beyond a singular hashtag or data point. Screenshots allow researchers to provide evidence for their theoretical claims: "In Black and queer digital cultures, screenshots are essential to 'showing the receipts'—the proof of action that can be called up at will to substantiate

claims or demand accountability” (Clark, 2020: 205). Screenshots provide concrete evidence without necessarily attributing specific words or images to research subjects. This is crucial, as published academic and journalistic research can make subjects into targets if their words or images reach the wrong people. The screenshot provides evidence, and constitutes the researcher’s own personal archive, without necessarily outing anyone.

As a methodological tool, screenshots can supplement ethnographic fieldnotes. Ethnography is difficult to disentangle from colonialism; salvage ethnography was predicated on the racist assumption that anthropologists were documenting the last glimmers of dying civilizations and languages. Colonialist ethnographers viewed their research subjects as static relics from another era. But in fact, through their fieldnotes and observations about the Other, ethnographers also told on themselves. Through images, words, and storytelling, and by capturing lived experience, anthropology contains a transformative potential. As anthropologist Anand Pandian puts it, “An ethnography is magical by nature, founded on the power of words to arrest and remake, to reach across daunting gulfs of physical and mental being, to rob the proud of their surety and amplify voices otherwise inaudible” (2019: 7). Classic ethnographers revealed a great deal about themselves and their own cultures through their accounting of others. There is also a tendency within anthropology to fetishize the ethnographic vignette, the affective entanglement that is the preamble to an interview, or the high-stakes, visceral encounter, which can make remote or digital ethnography feel somewhat lacking. Screenshots might capture snippets of a vibrant social world, but they are not the entire story. Rather, they document the perception of the observer. They become a *de facto* form of fieldnote. Not a sign of some kind of objective truth, but a subjective positionality.

In the next section, I will outline some ways that screenshots can be applied to digital research contexts as a way of working with and through digital ephemerality. Along with interviews, field visits, and other ethnographic methods, screenshots provide a material record of a researcher’s experiences over time and help form an autonomous archive separate from precarious platforms. Not only are they a form of tactile document and a form of witnessing, or a way of fostering communication between the

living and the dead, but screenshots are also a ghostly way of capturing the fleeting real-time flows of online experience.

Platform Temporality: Screenshots for Uncertain Times

My first year as a PhD student, I spent an awkward elevator ride with a notoriously irascible anthropologist in my department. Another faculty member had suggested that I speak to him about my research. When I told him of my plan to study digital afterlife companies, or startups that promise to maintain people's digital belongings after they die, he quipped, "Good luck, that stuff won't last". But even then, I had a hunch that was the point. How do people attempt to hold on to the most transient of their belongings, and what fantasies and sorrows are embedded in the failed promises of startups that peddle eternity?

In 2009, I started my doctoral work by examining a bevy of brand-new startup companies that promised to preserve people's digital possessions forever. During the Web 2.0 heyday of the early aughts, people grew more attached to their social media profiles and the interactions contained within their email accounts and blogs. There was a growing cultural awareness that such materials might be of future sentimental value. Data was not only valuable for companies, advertisers, and governments, which could use them for purposes of extraction and surveillance, but data was also potentially sacred. In a few short years, Facebook went from being a social connector for elite college students to a space for memorialization. With personal photos and writings increasingly attached to corporate platforms and quickly obsolete mobile devices, how would this important memory-making be preserved and passed on to later generations?

Over the course of my research on digital death and posterity, most of my fieldsites have disappeared. I'm left with an archive of false starts, shot through with dead links. From the perspective of the startup company founders I interviewed, it is an archive of broken dreams. Startup culture privileges short-term gain, fast prototypes, and speculative investments based on vaporware; startup technology is not really built to last forever. Platform temporality is my attempt at capturing the awkward juxtaposition of ephemeral, real-time communications that are at the same time enfolded into

mourning rituals and posterity, and even captured and maintained as postmortem legacies.

What started out as an ethnography of digital afterlife companies—through interviews with the founders of such companies and with users who were engaged with digital memorialization, including mourners who were charged with maintaining the social media profiles and blogs of dead loved ones, and site visits to key institutions working towards digital immortality—eventually became a history of failed attempts at digital posterity [See Figure 2]. I tracked various aesthetic and sociotechnical iterations of digital estate planning companies over time, from small Hong Kong-based startups that used cute grim reaper images to British companies that attempted to mimic the boring vibe of traditional life insurance company websites. The majority of those companies, along with a number of popular social media platforms, disappeared over the course of my research. I took detailed screenshots of my own experiences with the companies, including the email notifications I received about their eventual demise.

DEAD MAN'S SWITCH

[Home](#) | [Log in](#) | [Register](#) | [Pricing](#) | [Help](#)

The page you are looking for has mysteriously disappeared. Or perhaps it never was.

a [stochastic technologies](#) project | [blog](#) | [twitter](#) | [g+](#)

Figure 10: Screenshot taken by Tamara Kneese on January 14, 2014.

Figure 2: Dead Man's Switch. This is an error message I received when attempting to access one of my digital estate planning accounts. Screenshot of a 2014 screenshot from the author's dissertation.

My work, conducted over the span of more than ten years, also became a record of methodological and theoretical approaches to digital media. I began writing when the media world was flush with arguments about the democratic powers of Web 2.0 and the perils of users' free labor. In 2010, Geert Lovink wrote about the co-option of real-

time. Rather than an archive, social media temporality is a flow or a river. And yet, individual moments are lost in the stream. Lovink asks, “Who responds to yesterday’s references? History is something to get rid of” (Lovink, 2010). His words seem all the more relevant now, especially as mobile technologies, the gig economy, and the Internet of Things have become more or less ubiquitous since then. For many people, the experience of embodied life, and of temporality itself, is tied to information technologies.

From the vantage point of 2021, this work now captures a moment in web history that has since passed me by. While digital fieldsites—including platforms, algorithms, and their associated digital cultures—might move fast, sound scholarship is notoriously slow. The process from proposal to grant application to research funding to field study to writeup can take years, if not decades.

In the recent past, Friendster and MySpace were go-to websites for memorialization and memory-making. Now, both companies are defunct and users had to take care to preserve their own data before it disappeared. Platform ephemerality has ramifications in contexts outside of death, such as Tumblr’s removal of adult content: anything you produce and cherish may perish if it relies on a corporate platform. Users have come to expect their smartphones to die after a couple of years, so they upload their family photos and other documents to paid services controlled by Google, Apple, or Amazon. But putting data ‘in the cloud’ is not a guarantee if payments stop or services are suspended. One form of uncertain data management is traded for another. The speed and the inherent ephemerality of digital media also affects research of these technologies, although for the most part ‘nowness’ is a taken for granted starting point for digital studies. What would it mean to instead take death, the precarity of digital media worlds, as a methodological starting point? As John Durham Peters observed, “Distance and death have always been the two great obstacles to love and the two great stimulants of desire” (1999: 137). Rather than posing a problem to be solved, death generates meaning and the desire for connection.

Reflecting this pathos, the screenshot itself fails to capture everything. Like other capture methods, it is incomplete, even as it materializes the affective flow of social media. David Karpf points to the importance of the Internet Archive’s Wayback Machine as a research tool, but he notes that it has a passive “lobster trap”

configuration. The Wayback Machine does not capture every aspect of every website, and it cannot capture the details that future researchers might rely upon to get a sense of sensuousness of platforms. Some sites are hardly ever updated whereas others are regularly maintained (Karpf, 2012: 648). Like the Wayback Machine, screenshots of lost internet worlds do not present a full picture. They are imperfect mechanisms for capturing phenomenological experience.

Within the context of internet time, how can ethnographers, who are trained to conduct immersive, intensive studies of cultures over a long period of time, cover unfolding events as they happen? Yarimar Bonilla set about researching the Black Lives Matter protests in Ferguson, Missouri after police murdered Michael Brown. For Bonilla and other researchers, it was difficult to keep pace with the news cycle and quickly changing hashtags while “still retaining the contextualization, historical perspective, and attention to individual experiences characteristic of a fieldworker” (Bonilla, 2015). According to Bonilla, tweets, memes, and hashtags are important cultural artifacts and thus worthy of critical analysis by ethnographers, who might combine digital and on-the-ground methods. This kind of mixed methods approach is especially relevant amid the COVID-19 pandemic, which has disrupted traditional ethnographic fieldwork that required long-term participant observation and travel.

Other ethnographers have suggested novel approaches to technologies like algorithms, which tend to be discussed as “black boxes” by critical researchers, instead looking at how human individuals and institutions interact with algorithms (Christin, 2020) or algorithms’ existence “in the wild” (Seaver, 2017). Algorithms themselves, like screenshots, are not stable and are used differently over time and in different contexts. Relying on the insider’s or ‘emic’ view, in anthropological terms, is therefore insufficient. Because of barriers to access, Seaver argues, researchers must become scavengers, examining how algorithms play out in ordinary life through habitual and institutional use. While they do not advocate for the study or unpacking of algorithms themselves, both Seaver and Christin examine algorithms’ relationships with people in the social world.

The need for attaching social practices to the aesthetics and technical workings of platforms becomes especially apparent in internet histories. Over the past several years, nostalgia for the web of the past has been taken up in popular culture. There are now

resurrected versions of defunct platforms like GeoCities that mimic their aesthetics and affordances, supposedly harking back to a simpler, more innocent internet. Or, in the case of MySpace, a time when platforms provided users with opportunities to hone their coding skills (Miltner and Gerrard, 2021). Dial-up Bulletin Board Systems (BBS) persist and there are subcommunities of BBS enthusiasts; older internets are still very much alive.² Because of the web's fast-paced ephemerality—the way a Facebook profile from 2004 is almost unrecognizable, missing so many of the features and affordances of the 2021 profile—users might feel nostalgic for a web of the recent past. Nostalgia for earlier web experiences has even yielded a new television series. On Means TV, a self-described anti-capitalist channel, the series *Preserving Worlds* relishes in the aesthetics and politics of earlier online experiences, from games like Doom and Myst to WorldsChat and SecondLife. In particular, the series showcases people's experiences of lost digital worlds:

Join us as we explore dated chat environments, appreciate player-created art, and meet people working against obsolescence to keep the communities they care about alive and accessible.

Virtual worlds are delicate things, and they can vanish with hardly a trace. Under Capitalism, preservation is often the last priority.

But even if you manage to archive the offline software, a dead world can only tell you so much. It's just as important to document how people spent their time within it.³

This kind of documentation is what social media ethnographers strive to do, working against a clock that could run out at any time. Platforms do not usually disappear without warning. There are often red flags, such as the “white flight” shift from MySpace to Facebook documented by danah boyd (2012). Even when platforms are relatively stable, however, their affordances and interfaces still fluctuate over time. Internet researchers who linked to Trump's tweets in their published work now leave a trail of dead links to tweets that are no longer online. This is why screenshots, in tandem with interview materials and other careful documentation, can provide a researcher with a more foolproof archive. Screenshots constitute one form of

documentation and can help capture the sensuous, visceral experience of a specific online time and place.

But even screenshots are potentially fragile and fail to capture everything. They gesture toward posterity and help frame experience. Ultimately, though, screenshots are also imperfect vessels for immortality. How does it change an ethnographer's approach when disintegration is inevitable? It might mean going into the field with the understanding that your screenshots and personal archiving of context might be the only part of the field that survives in the end. Relying on platforms and even on institutions like the Internet Archive will only get you so far.

While official internet histories and the sporadic captures of the Internet Archive will tell one story about the lived experiences of the web, DIY screenshots can reveal a more prosaic history. Going beyond platform owners, content producers, and influencers, what are the subcultural interpretations and riffs on technology that are evident through gathered screenshots over time? If from the start you know that your field site will disappear, and that it never exists in a singular physical space to begin with, how does that change your strategy? What does starting from the vantage point of death do to studies of the digital?

The digital format provides the scaffolding for afterlife imaginaries and communication with the spiritual realm. There is at least the potential for an eternal life through bits. This is taken to an extreme in certain transhumanist and technoutopian circles. But at the same time, the digital format is defined by its very obsolescence. There is the possibility of file degradation as well as link rot, server failures, and dead devices. There is also a social form of precarity, in that the race for the new and fetishization of the latest gadgets ensures that maintenance techniques are overlooked and underappreciated. A great deal of grunt work goes into digital preservation. Screenshots, to an extent, do make that personalized labor more obvious because the user's perspective and own metadata are captured in the process.

There are many ethical quandaries within the context of digital ethnography. Increasingly, I find myself turning away from formally quoting or even analyzing other people's intimate mourning moments, whether that information comes to me through digital fieldsites or through interviews with interlocutors. But as a researcher, you need

some way of documenting what you are seeing, even if no one else sees it but you. There is a case to be made for a separation between a researcher's personal archive, or collected fieldnotes, and the quotes or images that are published and recirculated in new contexts. Rather than mining other people's pain, or documenting their grief through their interactions with digital platforms, I approach death from an infrastructural perspective. What are the platform infrastructures that create the scaffolding for digital afterlives, and what does it take to actually maintain these kinds of mourning objects?

Peters is clear that communication with the distant or dead does not have to be effective; the communication itself is valuable even if it ultimately fails (1999: 152). In fact, imperfect communication is a blessing, not a curse: "To 'fix' the gaps with 'better' communication might be to drain solidarity and love of all their juice" (Peters, 1999: 59). In a sea of dead devices and defunct websites, screenshots are a way of rematerializing transient digital cultures. Screenshots are one strategy for working with and through platform temporality, rather than trying to fight against breakdown. Following Peters and other critical scholars of infrastructure, finitude is not a problem to be solved, but an imperfection to be embraced.

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Notes

¹ <https://petapixel.com/2015/02/11/experiment-shows-happens-repost-photo-instagram-90-times/>

² <https://www.theatlantic.com/technology/archive/2016/11/the-lost-civilization-of-dial-up-bulletin-board-systems/506465/>

³ <https://means.tv/programs/preservingworlds?cid=1699448>

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