MEMORY

MY PARENTS OWN A BIG RUBBERMADE BUCKET filled with hundreds of loose-leaf family photographs. It has survived multiple basements and multiple basement floods. While the storage method leaves the photographs vulnerable to the elements, it also makes the act of remembering more dynamic, and keeps the memory fit. No two pictures ever follow in the same order and you never know what the next image will prompt. Most of the photos I've taken on my own are stored with services that make them arrangeable, reproducible, and public, with options. Some I took to capture the moment, and others, more and more, because the moment called for them. This form of storage is sturdier, but it leaves them at the mercy of elements less predictable than mold, and turns things infinite that were meant to be finite. Not all images are meant to be memories, but the technological systems we increasingly tend to default to for archiving don't know the difference.

OFF THE MAP

When my childhood home went missing from Google Maps, I wondered what remained of it

by MARISOL GARCÍA WALLS

THE SCREEN ON my cellphone read 4:52. It was Christmas morning. I'd had a nightmare, and I fumbled over to my computer, overwhelmed by an urge to see the house again: my childhood home, the one I'd left on a Monday in 2009. I entered my old address into Google Streetview and waited for a few moments, expecting a sight that would reassure me—or maybe not, but I needed to see it nonetheless. The screen flashed with the names of streets that were once familiar: I could see the park and, dragging the yellow Streetview humanoid through the screen, I could walk to my school, wander the two streets parallel to mine. But Google did not have access to my street. Instead, a foreboding, ominous glitch kept sending my yellow humanoid to the streets nearby.

In the dream I had seen the house. It had been renovated, but in minor ways—the sort of change you would expect if we had continued to inhabit its wide, luminous spaces and we had been able to make new marks on the walls. There was a party going on. It started out small. Just a few friends and acquaintances from our past, scattered around the house, cheerful, chatting and holding drinks in their hands—maybe laughing a bit too loud. Suddenly, the party began to fill with more people. Fewer friends and more strangers. We pleaded with our guests to leave, but they would not listen, as if our words were sealed inside a pool of water. Then I felt it: Fear.

Time accelerated. The sounds of the party got louder and louder. The images around me began to swirl. I wanted to run, but how could I escape from my own house, from my own party, full of guests unknown to me but guests, nonetheless?

As I glanced in the mirror, my face glowing with the blue light of the screen against the darkness, I felt uncomfortable. The house's absence in Google Maps was linked to my own absence from the place where I'd grown up. My mum, sister and I had left our neighborhood after our house was robbed and we were assaulted in the process. No pictures survived the robbery—our computers and hard-drives were stolen. Since then, like many middle-class neighborhoods in Mexico City, our former neighbors had closed the street in an attempt to make it safer, rendering it inaccessible to Google Maps. People often ask me if, as a writer, losing my computer to the robbery was not the worst that could happen to someone like me. What I miss the most, to tell the truth, is not the unfinished novel or the coursework from my first year in college but my digital archive as a whole. Poor and precarious as it was, it would be the only way of peering into my life before it radically changed: my music library, my cell phone pics, the Word documents where I stored my notes and diaries. Some odd times I still find myself looking for a file that no longer exists.

As photography has become cheaper and more capable of rendering images immediately, seemingly without the intervention of a third party, we've become detailed archivists of our own lives, producing hundreds, if not thousands, of visual documents of everyday life that range from our most intimate moments to our most trivial ones. But their retrieval is dependent on other entities: Our hardware, where visual memories are accessed, exchanged and stored; the applications that make them legible; the people who manage the technologies we trust with our pasts, and who in many ways determine which parts of them we're allowed to see. Meanwhile, the more we outsource these mementos, the more vulnerable we become to glitches and limitations. They jeopardize the idea that new media renders a better picture, closer to reality, and sometimes threaten to obscure our own recollections.

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I FELT A STINGING desire to return in body to my childhood home, to regain my sense of that place. I pleaded with my boyfriend to take me there the following week, on a Saturday morning. I wanted him to see it: the yellow house where I had been a girl, played hide and seek, buried my dog under the tall fir. I felt that the place, and the way we abandoned it, had strongly determined the woman I'd grown into. I wanted him to be able to visualize the memories that I had shared with him.

As soon as we got there, policemen asked us where we were going. Six years after the incident, my ID still listed the address, so I made up a story: I was a former neighbor and my credit card had been sent erroneously to my old house. The police followed us while we drove to the end of the street. My feeling of displacement then, in the neighborhood that had seen me grow up, was a feeling not unlike the one I experienced in my dream.

"Nice," my partner said, looking at the last house on the street, a small property with a frontal patio, a charming iron gate, overgrown plants and children's toys scattered all over the place.

"That's not it," I said, pointing to the second to last.

My childhood home has become a placemark for something that is missing

It had undergone renovation. The tall fir was no longer there. I took my cell phone out, determined to document the moment, but I could only take one picture before my battery died. With the street so different from the one I'd known, I thought to trust my memory as a better keeper. But it might be as flawed as the map.

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One Friday night soon afterward, I was having a conversation with my partner and two other friends, one of whom works at the school I once attended. After a couple of beers, I found myself reminiscing about the neighborhood. The school headmistress, an elderly, vigorous woman, lived a few houses away from mine. Her house had flooded one year when the river overflowed. When my sister and I were kids, long before we were her students, she used to invite us over to dig up treasures in her terrace garden, built over the ruins of her lost ground floor. The neighborhood, by then, in the late '90s, had rebuilt itself and its scars were invisible. My sister and I searched for plastic and stones, and dreamt of the day when we would find an object significant enough to allow us to call ourselves archeologists.

By then the flood seemed too far away in the neighborhood's collective memory to be considered painful. But some had lost everything. An artist, Feliciano Béjar, who lived on the other end of the street, had lost his studio to the water—he'd lost his sculptures and paintings and, according to a news report, was sectioned in a mental institution following "a breakdown." In a 1999 interview about the aftermath of the flood, Béjar said that he had bought the house nearly 50 years earlier, when the area was considered part of the countryside and not in the bustling heart of Latin America's largest city. "This was a small hill and there was a river, but it didn't hurt anyone. The problems started when the river was dammed," he said. He died in 2007, two years before the robbery and my assault.

Looking for Feliciano Béjar's house on the map, I discovered another inconsistency in Google Maps' interface. The Satellite view was years old—of his house when it was still standing, before it was destroyed. The allotment was huge and still full of green. But the Street view shows it as it looks today: an empty lot awaiting the construction of yet another residential building following Mexico City's real estate boom. "Atlamaya Art Residences," reads the firm's website, "is an exclusive concept that fuses art and an elegant lifestyle, with 'sky amenities' that inspire tranquility, balance and pleasure." The project is set to be completed later this year.
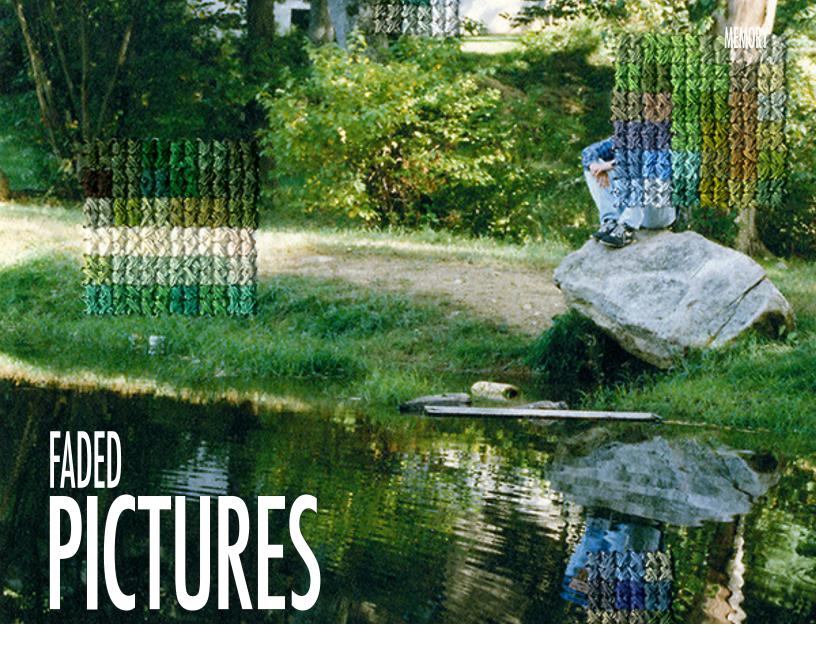
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I wonder if the new residents will ever ask about the people who lived there before them—whether, like my sister and I, they will try to excavate, in soil or online, the relics of lives that once took place there. Most likely, they will never piece together the past with the clues available, piecemeal, just as my sister and I were ignorant of the flood that had once changed the neighborhood where we used to play. My childhood home has become a thing defined by non-existence, a placemark for something that is missing.

In the age of mnemonic abundance, we tend to assume that we will remember everything—or that everything will be remembered for us, and access to our memories will remain at our fingertips. Recipes. Conversations. Locations. Price tags, and even the spectral messages left by others long gone, metaphorically or not. Derrida spoke of domiciliation as one of the necessary conditions for an archive to exist: In order to be conjured, memories need a place to dwell. What happens when these dwellings no longer belong to us? ◦

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FADED
PICTURES

Our life stories are vulnerable to external archives

by KRISTEN MARTIN

IN 2003, WHEN I was 14 years old, I received my first digital camera as a Christmas gift. Before that, a late-1990s model Polaroid had offered the nearest thing to instant gratification. Polaroids still took several minutes to fully develop, and film was expensive. If I wanted to take a lot of pictures on, say, the last day of school, I would opt for a cheap disposable camera, but those only held 27 shots, and you wouldn't find out how many you ruined until you got the film developed. The memory card in my digital camera held far more images, which appeared instantly on the screen, and taking hundreds of pictures cost nothing beyond the initial price of the camera. I documented my friends and I hanging out in basements, or killing hours on Friday nights at 99-cent bowling. I wanted to say: "Look: This is who we are. This is who I am," and I wanted to invite my friends to see what I had framed in my viewfinder.

The resulting pictures didn't live in an envelope from Camera Click One-Hour Photo anymore—I'd download them from the camera to my computer, and then upload them to the internet, sharing the links over AIM. Before MySpace profile pictures and Facebook albums, our pictures were shared on photo-hosting services.

Maybe you used Picturetrail or Photobucket; I used Webshots, where I turned random photos into plot points, shaping them into wittily named albums with wittily phrased captions under each picture, creating a narrative of my teenage life that existed in a perpetual present.

In that present, my friends and I were still together. The summer after I got my digital camera, I moved away from my Long Island hometown and the friends I had grown up with. My move was precipitated by my parents' deaths—they both died of cancer, first my mom in 2002, and then my dad two years later. My impossible situation was exacerbated by not being able to hang out with my best friend Katie every Friday, or walk to Ralph's Italian Ices from Kristi's house in the summer. In those spaces, my loss was intimately known but never mentioned—I could pretend that my life had not been irrevocably shattered. After I moved to my aunt's house in New Jersey, every time I saw my old friends was an occasion for a photo shoot. I uploaded the pictures to Webshots, preserving the utter comfort I felt with my friends where I could call it up on demand.

As Susan Sontag wrote in 1973, in the first of a series of essays on photography for the *New York Review of Books* (later collected as *On Photography*), "The most grandiose result of the photographic enterprise is to give us the sense that we can hold the whole world in our heads—as anthology of images." Forty-four years after Sontag wrote these words, we don't have to keep the "anthology of images" in our heads anymore— our phones and computers hold them for us. My friends and I went on to create Facebook accounts, then to rely on Instagram for sharing photos. I had largely forgotten about Webshots until the advent of my 10-year high school reunion. I was struck with nostalgia for being 14 and 15 and 16; I wanted to look at pictures from those years when I felt so desperate to keep my ties to my childhood friends strongly knotted. But in 2012, Webshots as we knew it was gone— my accounts were deleted.

That an external force—one I had wrongly assumed would forever preserve what I'd entrusted it with—had dismantled that narrative I had created for myself of my teenage life felt more unsettling than the hard drive crashes or misplaced envelopes of photos I had weathered before. Those losses, whether digital or analog, felt more under my control; with Webshots, a business decision destroyed my image anthology without my even knowing it.

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WEBSHOTS WAS LAUNCHED IN 1995 as a desktop wallpaper website by Andrew and Dana Laakmann, Narendra Rocherolle, and Nicholas Wilder. According to the AP, in 1999, amid the dot-com boom, the co-founders sold Webshots to Excite@Home for $82.5 million; they bought it back for just $2.4 million in 2002 when Excite@Home liquidated. By then, Webshots had incorporated photo-sharing into its business model, recognizing the need for digital camera users to do something with their photos (even in the early 2000s, only a fraction of digital photographs were printed). In 2004, ComScore Media Metrix scored Webshots as the most popular photo-sharing site, with "about 7.2 million monthly visitors," according to the *New York Times*. Using Webshots, it was easy to forget that the photos we uploaded to albums and shared were not wholly our own, that storing photos on Webshots did not mean that they were safe from hard drive crashes—that Webshots' hosting could end at any time.

The site changed hands two more times: in 2004, the founding trio sold Webshots to CNET for $71 million; in 2007, CNET sold it to American Greetings for $45 million. Throughout, Webshots remained a photo-sharing service. In 2012, though, Threefold Photos—a new company with Rocherolle and Wilder on its board of directors—purchased Webshots and changed the business model drastically. As Gigaom explained, the new, "more modern photo experience" was called Smile by Webshots, a cloud-based app that aggregated photos shared on social media with photos stored on phones. When they made the switch to Smile, Webshots wiped users' photos if they did not sign in to approve the transfer of

their accounts to Smile's servers—690 million digital memories that users had trusted Webshots to preserve were vulnerable to deletion.

The service claimed to have "an aggressive plan to notify everyone who does have photos to make sure they aren't caught unaware." I never saw that email, if it ever came, nor the article in their FAQ section about the upcoming mass deletion; many other missed the notices too. "On October 2, 2012 American Greetings and Threefold Photos shot their loyal customers through the heart—destroying it all for a quick buck," reads the About section of a Facebook group with an accompanying website called "Smile by Webshots Sucks." (Smile only lasted a few months, and Webshots has since reverted to its original wallpaper model.) Commenters on the site and Facebook page report losing baby photos and photos of dead loved ones ("Please help me as you have my grand babies photos since birth and my father before he passed away") and wedding pictures ("been married for 10 years now in July. was hoping I could get them back for our 10th"). One woman on Facebook summed up her sense of dispossession by writing "I want my PHOTOS!! MY LIFE!"

I didn't feel like I had lost a part of my life when Webshots was wiped, but I still longed to access my teenage photography; I was hoping it would help me remember what it felt like to be me back then. Smile by Webshots Sucks found a workaround for retrieving lost photos: Via the Internet Archive's Wayback Machine, Webshots users can search for their old accounts and download ZIP files of their photos, although the search only works for public accounts, and you have to recall your old username. I was only able to remember one of mine accurately.

The ZIP file I downloaded was a series of disorganized, concatenated folders. The largest ones were labeled opaquely with names like "image04.webshots.com"; opening that folder led to one named "4," which held "4," "6," and "8." Though the photos were stripped of the

context I had given them when I uploaded them to Webshots, most of them still served as Proustian madeleines that brought back more than the moment they captured. Other times, instead of triggering memories of the events, what I remembered best was the photos themselves. The ZIP file contained dozens of pictures from a sweet-16 party in 2006. In one, I'm wearing a green dress, posing with my friend's crutches. I remember posing for that picture, but I don't remember anything else about the party.

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Roland Barthes partly explains the impulse to take a picture in *Camera Lucida*: "The Photograph is never anything but an antiphon of 'Look,' 'See,' 'Here it is'; it points a finger at a certain vis-à-vis, and cannot escape this pure deictic language." An antiphon is a verse sung responsively, as in the liturgy; we repeat "look" in our heads to ourselves and others as we take photos. The photos I posted on Webshots felt like "pure deictic language," a way for me to direct attention to the primacy of my childhood friendships.

Susan Sontag argues that when we photograph, we also impose our power, turning photographic subjects into objects that we acquire: "To photograph is to appropriate the thing photographed. It means putting oneself into a certain relation to the world that feels like knowledge—and, therefore, like power." By taking photos, we are using our power to freeze the moment and to keep it alive, to make it something we can *own,*

The photos became evidence not of my parents' lives, but evidence of my loss

not just see or live through. The resulting photographs turn into proof that these moments happened—proof, for instance, that I went to A&S Bagels after midnight with my friends in 2006. As Sontag wrote in 1973, the camera is "the device that makes real what one is experiencing," or, as we might say now, "pics or it didn't happen."

But do photographs merely capture what is real? In *Camera Lucida,* Barthes compared the camera to other ways we mark time: "I recall that at first photographic implements were related to techniques of cabinetmaking and the machinery of precision: cameras, in short, were clocks for seeing." This implies that the camera records the past like the ticking of a minute hand on a clock. But what happens when the photos we have of the past only offer a partial view—not what actually occurred but only a portion of it? And if photographs don't help us accurately record the past, then why are we so desperate to hold onto them—and so afraid of losing them, as in what Smile by Webshots Sucks called the "virtual tsunami" that "destroyed" Webshots?

Both film and digital cameras capture images by admitting light (through a lens, aperture, and shutter) and allowing that light to strike an image plane (which is either chemical film or a digital sensor). As Barthes explained, "the photograph is literally an emanation of the referent"—the referent being the thing placed before the lens. The lens redirects the light bouncing off the referent to record its real image on the film or digital sensor. Because of these mechanics, we assume that photographs furnish incontrovertible proof of the past.

But of course, subjectivity is involved in every shot. Sontag was preoccupied with the limits of photographic representation for decades. In her 2002 *New Yorker* article "Looking at War," she reminds us that a photograph "is always the image that someone chose; to photograph is to frame, and to frame is to exclude." The photographs that I lost to Webshots were never the evidence of my teenage years that I wanted them to be—they were colored by what I framed and what I excluded. These photos could only ever demonstrate my point of view (or the points of view of others who used my camera). And framing further excludes

the moments that happen before and after the shutter opens and closes. Or, as Barthes put it, "why choose (why photograph) this object, this moment, rather than some other?"

What I chose to photograph as a teen spoke to my subjectivity back then—what I saw, and what I wanted to preserve. My Webshots accounts served as records of my point of view as I wanted to present it to the outside world and to myself; what I chose to group together into albums and captions further cemented my perspective. Even though I was able to get some of my Webshots photos back in that ZIP file, the "virtual tsunami" had disordered my carefully crafted narrative, making it harder for me to truly access who I once was and how I once thought.

Now that digital cameras are ubiquitous, shrunken into our phones, we ceaselessly document our daily lives, adding to the ongoing records of our existence. I don't think of myself as someone who takes tons of iPhone pictures, but my camera roll from the past month tells a different story. There are pictures from nearly every day: of my neighbor's elaborate Halloween decorations, of the Brooklyn sky turning millennial pink, and about 100 pictures of my two cats and puppy. We live in these digital photos. They follow us around in the cloud and on apps, always available for recall. If I want help remembering what I was doing this time last year, I can scroll through Instagram and find a photo of a Victorian house and a London plane tree. I took it as I was walking home from the grocery store—my boyfriend and I had just moved, and the house and the tree made me feel in love with where we now lived. I wanted to hold onto the feeling and share it with others.

The iPhone archive of my quotidian life speaks to how I move through the world, and what moves me. It feels radically different from the photo albums that my parents arranged images in when I was growing up; the narratives contained within those leather-bound volumes only captured special occasions, not our daily reality. My phone albums feel different than my early digital photography on Webshots, too—I only had my digital camera with me when I was with other people, and I could only access my al-

bums when I was sitting at a computer; that, too, was an occasion. Now, my phone is never more than a few feet away from me, allowing me to add to, edit, reshape, and reimagine the narrative of my life at will.

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I HAVE BEEN THINKING about photography's limited view of the past since college, when I took a course called "Writing from Photographs"; we employed photos as jumping-off points for nonfiction storytelling, reporting into what the photos couldn't tell us. In this class, I started to write about my parents via investigations into photos taken before I was born. As I tried to reconstruct what was happening in these photos, I was confronted with my relatives' gaps in memory—there was no way for me to piece together my parents' stories without them here to fill in the voids. The perspectives that mattered most to me were theirs. The photos therefore became evidence not of my parents' lives, but evidence of my loss.

I was reminded of how a photograph can be a reminder of loss while reading Barthes' descriptions of looking through photographs of his beloved mother shortly after her death: "I never recognized her except in fragments, which is to say that I missed her *being,* and that therefore I missed her altogether." Each photo I have of my parents only holds pieces of my parents as they actually were in life, but the pieces are all I have left. I wish that I had more pieces, that my parents had lived to see the advent of digital cameras and cameras in phones, that they had left behind more of a record of their unique subjectivities, however vulnerable those records might be to erasure.

Despite my cognizance that photographs lie and that the truth can only be found between the frames, I cling to them. I am thankful that the most important photographs I own—those of my parents—are physical. They'll never succumb to the kind of digital disappearance my Webshots photos did. While it is true that they might be still be lost—to flood or fire or

misplacement—and bereave me all over again, demise by accident feels more natural and less maddening than what happened with Webshots. The photo files stored in that archive were part of narratives people constructed of their histories; Webshots wiped them as part of a business decision. Knowing that my Webshots photos were willfully deleted by strangers makes me think of how much of my life's record I've entrusted to outside services like Facebook and Instagram, and how vulnerable those records are to external impositions.

When we lose photographs, we lose the preservation of moments that we had suspended in time. Personal photographs function as evidence of *our* subjectivity—the fact that we exist as humans with distinct points of view—and evidence that what we photograph existed, even if it was only for a moment in time. Photos capture "what has died but is represented as wanting to be alive," as Barthes said, meaning that while nothing can ever exist exactly as it was as a freeze-framed moment in the past, the freeze-frame keeps it immortal. But, as Sontag wrote, the act of suspending a dead moment in time makes it into a "memento mori." As such, taking photographs makes us "participate in another person's (or thing's) mortality, vulnerability, mutability."

This feeling is compounded, of course, when we look back at photographs we took of people who are now dead, but it comes to mind when I think of the photos I had once posted on Webshots—they were records of versions of myself and my friends that are now dead; now, so are the photographs. If, as Sontag wrote, photography allows us to relate to the world in a way that "feels like knowledge—and, therefore, like power," the loss of these archives feels like a loss of power over my own life narrative. Those narratives are mortal, too. ◉

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EXTERNAL MEMORY

Nostalgia for an internet that never was

by MADELEINE MONSON-ROSEN

IN 2010, THE internet discovered *Space Jam,* although you could also say it was *Space Jam* that had earlier discovered the internet. Released in 1996, the film boasted one of the first movie marketing websites, and perhaps the first to actually take advantage of the technology of the web. In 2010, the site was still online and unchanged when it was found by a group of Reddit users who experienced a kind of Proustian memory, rediscovering a childhood and adolescence spent online at a time when that world seemed much smaller, and much friendlier, than it is now.

Our popular culture of the present moment is permeated with nostalgia for earlier iterations of the web, stories of a time when the internet was the milieu of the weird—of "wizards and geeks," in the words of a 2006 Pew report. Yet these fictional expressions of internet nostalgia are often less concerned with real encounters with the past than with an imagined past that soothes our anxieties about the present—a vision of the internet that never really existed. Depictions of the internet from the 1980s—most obviously William Gibson's matrix, and *Tron*—imagined an expansive, topological world more visual than textual, a parallel universe or alternate dimension.

This idea of the internet as an immersive media environment, a created world, still haunts

us. *Ready Player One,* the 2011 novel and soon-to-be Spielberg film, revels in '80s kitsch, storming through every pop-culture version of cyberspace and imagining the future internet as much closer to *Tron* than to our present iteration. It suggests the distinction drawn by the Marxist literary critic György Lukács between bad historical fiction, which he characterized as "mere costumery," and better, which wrestles with the specific "historical peculiarity" of the age represented by a work of fiction. It is increasingly obvious that the internet is less an immersive playground, less a virtual environment, than it is an archive—a Library of Babel that is sometimes incomprehensible, sometimes sinister, but occasionally beautiful. What we encounter in that archive is an experience that is distinctly embodied and stands in stark contrast to the fantasy of virtual space.

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IF WE DO THINK of the internet as an archive, we probably think of it as archiving *us.* Pieces of our real selves, the detritus of our communications, consumer choices, and other instantly forgettable acts are packaged and sold, the information revealed to us in the form of Facebook ads and sponsored tweets. Otherwise, the internet can seem hyper-ephemeral, with changing web-design aesthetics as distinctive to their eras as fashion trends seemed 30 years ago. (Will someone in 2030, I wonder, discover a Squarespace-style, endlessly scrolling website and find themselves overwhelmed by waves of memory? Will the hip minimalist landing page look as old fashioned as a command-line interface?)

The polymorphous ethos of the web would seem to reject the very idea of preservation. Facebook memories notwithstanding, Wikipedia and similar sites are tormented by "bit rot." ("I for one can't wait until academic research just consists of getting 404 errors on defunded websites," wrote Simon Parsons, a University of London lecturer.) And yet, perhaps through simple neglect, much of this ephemera is preserved in ways that have

proven difficult to predict. Archives, internet or otherwise, are full of the mistakes of the past, and those mistakes, the idiosyncrasies attendant in preservation, often tell us much more than do representations of the past that claim authenticity but fall into costumery.

Imagining the internet as an alternate dimension, a space that you could visit that—in the case of Ready Player One—you can shape according to your own or someone else's childhood memories has perhaps emerged as an antidote to the reality of much of our lives online. This is something like what Sunny Moraine calls the "construction of the unruined past," a fiction that enables visions of decline and dysfunction in the present. *Ready Player One* imagines the internet through a fog of nostalgia for a space that retains the consistency of a childhood memory, in contrast with our own experiences of an increasingly hostile web.

The very act of "entering" online space becomes a kind of fantasy of escape in AMC's *Halt and Catch Fire,* a period drama about the birth of the personal computer and the world wide web. *Halt and Catch Fire* transforms nostalgia for 1980s and 1990s computer hardware into a kind of internet teleology, proclaiming that these technologies were created with the purpose of connecting us. During a strategy session where the main characters attempt to figure out how to capitalize on the not-yet-public internet, corporate visionary Joe MacMillan insists, in a dramatic set-piece monologue, "all we have to do is build a door, and let them inside." That "inside" remains the province of memory and fantasy. The scene is nostalgia disguised as teleology—a product of the present projected onto the past. It retains none of the memory of experiencing the internet's precursors, or the early web, and it reflects more what we'd like the internet to be than what it is.

This focus on the *space* of the internet suggests that perhaps we have been wrong about the emphasis in the portmanteau *cyberspace* all along. "Cyber" has been synonymous with technology's bleeding edge for a long time, but popular visions of the internet have been preoccupied with the second part: *space.* We remain enchanted by the notion of the internet as an environment, an open world whose constant renewal and revision is possible, and

whose population is an endlessly reinvented parade of avatars, new selves created to suit each permutation of the internet's environment: selves that are wholly plastic, wholly constructed, and serve to hide, obscure, or at the very least *alter* the identity of the user. But the risks of life online—and a few of the rewards—reside not in the malleability, and unreliability, of identity online, but in the fact that the internet is a repository of real information about our selves and our lives. Not as we'd like to imagine them, but as they've been inscribed and preserved by forces beyond our control.

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THIS IS, OF COURSE, mostly terrifying. But sometimes it can be beautiful, allowing us to re-encounter previous versions of ourselves, re-inhabit memories that were built when we used different tools to engage with the world. Encountering the internet as an archive perhaps supervenes nostalgia, taking us into a realm of memory in which we are the recording medium.

We don't only inscribe information onto media; media also inscribes experiences onto us. Technologies, media theorist Wolfgang Ernst reminds us, record information, but they also record the technical and cultural proficiencies necessary to create and access such media. "The phonograph as media artifact not only carries cultural meanings like words and music but is at the same time an archive of cultural engineering by its very material fabrication." The same is true of books, films and—if we learn how to see it—the internet.

The user who posted about the *Space Jam* website on Reddit in 2010 wasn't only enchanted by memories of the film, and the pleasure those memories inspired, but—with its gifs, Easter eggs, and games, not to mention in-jokes written into the code—the "material fabrication" of the site, which stood as a profound relic of the web technology of the 1990s. This user led a whole online community into a shared memory: By following a link, they collectively re-experienced an adolescence influenced by the film, but more profoundly shaped by the web of the 1990s, the years when many of us first came online; it wasn't just the contents of that web, but the ways in which the muscle memories of navigating it were inscribed into them. That this was Proustian is not an exaggeration: MY CHILDHOOD HAS RETURNED proclaims one poster. "This must be how archaeologists feel," wrote SBNation; "This is a genuine (and genuinely garish) piece of internet history, and it should be left preserved," wrote Comics Alliance.

The redditors who followed the link rediscovered an abandoned corner of the web because those Warner Brothers servers were still running, frozen in time. But they didn't just discover a preserved artifact, they rediscovered the way web technology circa 1996 engineered their own experiences: the experience of waiting five minutes for an image to download, waiting twenty for a video (and the rage if someone else in the house picked up the phone). In this archive, weare the memory device, too. While, to return to Lukács for a moment, fiction certainly has the capacity to transmit the "peculiarity" of history, so far, fictional versions of the internet often remain hung up on the costumery of the past and fail to access the memories formed by actually interfacing with the internet of another era.

Space Jam, the website, is an obscure, absurd relic that also precipitated the construction of a profound history, one that rewards reading. Reddit users tracked down the site's original designers, and then, in 2015, *Rolling Stone* published a history of the site, interviewing those designers, who remain as surprised as ever that the site went and stayed online. Redditors' memories opened the door to perhaps the first truly significant history of a website. And that, it seems to me, is remarkable: After 50 years (give or take) of life online, those of us who live here have started to find stories worth telling. ◉

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INSTANT RECALL

How do we remember when apps never forget?
by MOLLY SAUTER

1. THE CANONICAL, STEREOTYPICAL memory object is Proust's madeleine, a small, buttery, shell-shaped cake that when dipped in hot tea becomes the catalyst for the densely wrought memories that make up Proust's seven-novel cycle. But modern life, each individual life, is peppered with evocative madeleines, some uniquely of our time, some evergreen. The scent of garlic and butter wafting out of a kitchen just before dinner. A particular song coming on over the radio. The embodied memory of turning your car into the driveway of your childhood home. The serendipitous rediscovering of a yearbook or a childhood diary. These objects and experiences induce reminiscence, and we re-member, literally piecing together our memories as they are called to mind, and through that process of re-membering, we also piece together ourselves, as Proust does.

2. Psychologist Dan McAdams, a professor at Northwestern University, holds that central to a happy life is the creation and maintenance of life narratives, dynamically evolving situated performances that integrate lives in time, providing what Adams describes as "an understandable frame for disparate ideas, character, happenings, and other events that were previously set apart." These stories are subject to constant additive re-

vision, as through living we continually add more material *and* revise the material available to us, rethinking and rewriting memories as we age. The process of remembering memories rewrites them, revises them, and this ability to re-envision our-selves is a central part of the creation of seemingly stable life narratives that allow for growth and change. If we were to lose, somehow, the ability to both serendipitously and intentionally encoun-ter and creatively engage with our memories, perhaps we would then also lose that re-visionary ability, leaving us narratively stranded amidst our unchanging, unconnected memories.

3. The social web has given us, in its infinite, generative wisdom, a suite of products and services to programmatically induce reminiscence. Apps like Timehop, which presents time-traveled posts from across your social media profiles, or Face-book's "On This Day" Memories, are attempts to automate and algorithmically define reminiscence, turning the act of remembering into a salable, scal-able, consumable, trackable product suite. As the work of memory keeping is offshored, Instagram by Instagram, to social media companies and cloud storage, we are giving up the work of remembering ourselves for the convenience of being reminded.

4. There are three different "memory" systems that I'm talking about here: predictive text, those systems concealed within your phone's keyboard that prod you to call your dad "pookie" because that's what you call your girlfriend; reminiscence databases like Facebook Memories or Timehop; and data doppelgangers constructed for ad tar-geting, the ones responsible for those socks that follow you around the internet even after you've bought six pairs. Each interacts differently with the data it collects, representing it to guide or nudge you according to different models. But the core of these models, their fundamental shared strategy, might be reduced to: "Those whose past is legible will be exhorted to repeat it."

5. Text prediction and autocorrect on your smartphone operate on two parallel models of algorithmic prediction: the general, which for each language set scans a pre-selected corpus of general interest and more esoteric websites that provide models for grammar, common sentence construc-tion, vocabulary and slang; and the personal, from

a corpus of individually generated content data, like text messages, emails, tweets, search requests, etc. So predictive text systems push the user in two directions simultaneously: be more generic—that is, adhere better to the corpus of generic source data—*and* be more like you have been in the past. Use the same words, the same syntax, the same mannerisms that you have used in the past. Be more like the cliché of you.

6. Similarly, the ad-targeting data doppel-ganger is more like a data echo, but even that doesn't quite cover it. Perhaps a better phrase would be data homunculus, the homunculus being the exaggerated, misshapen model of a human being intended to show the distribution of nerve endings in the human body. The hands, lips, tongue, and head of the somatosensory homunculus are grotesquely enlarged, reflecting those aspects of the body that the model is most concerned with. Similarly, the data homunculus can only reflect those aspects of yourself that are legible to the systems that seek to model you. The "you" reflected back is warped by the legibility of your behavior, and the interests and preconcep-tions of the model builders. Predictive text on your phone cannot (yet) take into account the differences between your spoken speech patterns and your typing patterns; ad targeting based on searches and Amazon browsing is a model based fundamentally on what you don't have.

7. Recommendations can set paths for indi-viduals, particularly when they offer shortcuts. Communications shortcuts in particular have changed the way humans talk to each other, re-stricting vocabularies, changing what is expressed or sometimes the fundamental meanings of utter-ances. Jonathan Sterne has written on telegraph code books, popularized as an analog mode of compressing complex communications into short strings of letters that could be sent over a wire cheaply. Because these code books were distribut-ed pre-composed, if what you wanted to say wasn't already available, you might have just gone with the next closest equivalent instead of spending the money to send a longer, more precise message. We're already aware of how "lol" and "IRL" have worked their way into everyday spoken speech, but there is also the delightful example of "that's so

book," a short-lived slang expression based on a T9 autocorrect suggestion for "that's so cool." Suggested speech becomes speech itself.

8. Algorithms don't just act upon people. Scholar Tania Butcher has noted that people also act upon and toward algorithms, orienting themselves and their communications according to how they determine various algorithms in their lives to function. In a social environment that has in many ways conflated social importance with algorithmic recognizability, it is necessary, for example, to ensure that Facebook can recognize your engagement announcement for what it is, if you want to make sure all your friends from high school see it. Digital reminiscence systems require the creation of digital memory objects, and prod us algorithmically to create specific kinds of digital memory objects, those that are algorithmically recognizable and categorizable, as part of their functionality.

9. McAdam's life narrative is made up not so much of memories as it is by the active, personal, and performative act of remembering. The inputs into Facebook or Timehop are not bits of narrative. A Facebook Memory cannot be a narrative fragment because it is static. But to state the obvious, it is also not a memory: It is a socially contextualized performative expression. Facebook's re-presentation of these "memories" strips them of context, recategorizing them as "events" or "moments." They are both separate from their own context in time and, as memory objects, unavailable for the remembering and rewriting that would be necessary to interpolate them into a coherent personal narrative.

10. The databases exist outside of time and outside of narrative. Social media posts are designed to be in and of the moment, focused on a completionist recency in a way that breaks even conventional models of the present. Presentness becomes redefined as relevant-right-now, based on a FOMO-informed anxiety about knowing-what-other-people-like-you-know. Social media are present-tensed broadcast platforms, intent on capturing ostensibly of-the-moment situated expressions, which, when presented back as "memories," carry all the authority of eyewitness testimony and all of its problems as well.

11. Memories change with the remembering, and evocative objects change as we age together. Physical objects, like yearbooks, photographs, cars, houses, trees, gravestones, exist in a place and are re-encountered, or are discovered to be conspicuously absent à la *Grosse Point Blank,* at specific moments: perhaps going home for the holidays, or moving to a new apartment, or clearing out a relative's home after a death; transitional, evocative moments. These physical evocations age, and their value and veracity as objects of testimony ages with them and us. They date, they fade, they display their distance from the events they are connected to and their distance from us. Digital memory objects, on the other hand, although they might abruptly obsolesce, do not age in the same way. They remain flatly, shinily omni-accessible, represented to us cleanly both in the everlasting ret-conned context of their creation and consumption. The user interface of Facebook doesn't time-machine itself to the design it had when you composed whatever memory it is showing you from ten years ago. In the visual context presented, you could have written it yesterday.

12. In these databases, digital memory objects exist coincidentally, but not inter-influentially, allowing for the existence of thousands of moments of presentness or presence. Jess Zimmerman, in her story "A Life in Google Maps," writes of the emotional vertigo induced by this all-of-time-

A continual living in the present means there is no space for reflection, for coherence-building

all-at-once: "Inside Google Maps, we still live together." Zimmerman notes that inside the world held statically navigable in Google Maps, multiple moments in time exist simultaneously. It's 2012 at her old house, it's 2008 at her ex-husband's lab, and it's 2014 at her office. "Inside Google Maps," she writes, "I live with you, and I live without you."

It's as if the wellness obsession with "being in the present moment" that has creeped into Silicon Valley over the past few years has resulted in a familiar technological hoarders tendency: if living in *one* present moment is good, living in endlessly arrested presents must be even better. A continual living in the present means there is no space for reflection, for coherence-building. There is just the continual, lepidoptery-like collection of "moments." Memories turned into mere mementos. Remembering turns into reminding.

13. The inability to control remembering, to the point where it interferes with daily life, causing emotional distress and prompting the creation of strategies to manage intrusive memories, is a core symptom of several psychiatric disorders, most notably Post Traumatic Stress Disorder. Oliver Sacks described a patient who suffered from unpredictable, overwhelming fits of reminiscence as suffering from "incontinent nostalgia."

When I asked my friends for examples of times Facebook Memories had brought up upsetting memories unexpectedly, I was overwhelmed by responses: people who had been reminded of dead pets, dead parents, dead friends, abusive exes, or times when they were sick or sad. One friend spent an inordinate period of time tensed in anticipation of the memories he knew were coming but he didn't know when.

14. The Memories Facebook displays to you, cheerily, at the top of your News Feed, appear to be a combination of fixed events it algorithmically recognizes as significant: engagements, weddings, birthdays, graduations, celebrations, and posts that were especially popular. My acquaintance with the dead dog was exhorted to remember the day he put his pet down, probably because the post got a good deal of traffic from friends offering their condolences. The algorithm conflates attention with positivity: surely if so many people paid attention to this event, engaged with it, clicked on it, this is a

thing you would like to be reminded of. The digital homunculus of memory is gorged on attention, and on recognizable personal milestones.

15. Facebook now gives you the option to blackout dates or individuals from appearing in your Memories. But as we, and others around us, export more and more of the infrastructural work of personal memory storage and retrieval to these technological superstructures—as evocative objects like photo albums, mix tapes, and handwritten letters are replaced by digital objects—blocking out stretches of time or exes or frenemies will increasingly leave us with two options: riddling our personal structures of remembrance with amnesia, as the evocative paths to memories are obliterated; or leaving ourselves open to continual assault by programmatic nostalgia.

16. In the film *Eternal Sunshine of the Spotless Mind,* we saw a version of the personal amnesia future taken to a logical extreme. If we delete these digital memory objects, we no longer run the risk of being assaulted by them, but we also destroy the potential to helpfully re-encounter them, perhaps serendipitously, when the sting of the original event has faded. Digital memory objects and digital reminiscence systems have left us in a catch–22: They are poor but convenient substitutes for the physical objects and mementos we have previously relied on as containers of memory. If we destroy the evocative electronic madeleine, we are left more and more floating in a self-replenishing sea of presentness and recency.

But if we don't, if we leave the madeleine in safe stasis in memory storage, we may be accepting a different type of tyranny, of memories that refuse to be altered, of constant confrontation with all of you at once, everything algorithmically legible you've ever done, existing simultaneously, clamoring for influence and attention. ◦

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