

What Are Memories Made of? The Untapped Power of Digital Heritage

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Why are we here and what are we doing? What is digital heritage supposed to be? We often get so involved in our particular projects and research goals that there is little time to zoom out to see the larger picture in which we—not only the pixels—are a part. So my intention here is to explore the contours of that larger picture, reflecting on recent ideas about the nature of human memory, its relation to cultural heritage, and connections of digital technology to both. For I don't think that it's an overstatement to say that a deeply shared faith in the closely-knit triad of collective memory, heritage conservation, and digital processing animates most of the members of the worldwide digital heritage community to do what they do.

Yet are the three nodes of this conceptual and relational triad working effectively together? Have the nature and relationship of each element changed or become obsolete? My intention here—with all due respect to the achievements of digital heritage in recent years, especially the achievements in visualization, data documentation, and information architecture—is to step back and consider where the field of digital heritage today stands in relation to the evolving theoretical perspectives about cultural heritage and new understandings of how memory—both individual and collective—actually works.

My own memories and experience with digital heritage go back to the late-1990s when the use of digital technologies first spread widely among cultural heritage practitioners. Computers had, of course, been used by archaeologists since the 1960s, heavily influenced by the quantitative hypothesis testing of the New Archaeology (Lock 1995) and by museum curators and collections managers for data processing and inventory monitoring (Sher 1978). Yet the use of digital technologies for public presentation of heritage sites was new—and seemed so much more magical, more miraculous than it does now. Forte and Siliotti's recently published *Virtual Archaeology* (Forte and Siliotti 1997) was a sensation. Donald Sanders's Learning Sites website was an avatar of the future (Sanders 2001), and at Ename the first augmented reality Timescope kiosk (Pletinckx et al. 2000), quaintly crafted with a plywood ceiling that supported a clunky PC console and an expensive video camera that had to be focused by hand. The “gee whiz” of it all suggested that modern technology could serve the cause of public heritage presentation. As public knowledge of history and archaeology was perceived by

heritage scholars and professionals as steadily declining, they had hopes that it would rise again on video screens.

With interpretive infrastructure like the first Enne Timescope, the public could at last make some sense of the labyrinthine wall stubs of an archaeological site, personally guided by a Barbie-like clone of the early Tomb Raider character. Yet the 3D reconstruction left little room for the imagination. As a site interpretation tool it was the equivalent of a robot. Its presentation of the significance of the site was effusive in its praise of archaeology but—despite extensive recent excavations—hardly differed, except in additional material details, in its historical interpretation of the militant westward expansion of the medieval German Empire from that formulated during the initial dig Adelbert Van de Walle during World War II (Van de Walle 1945).

Of course much has been accomplished since those early years in digital heritage theory, development, and impact assessment. Yet it's also crucial to measure the extent of those developments against the parallel, rapidly evolving fields of memory studies and general heritage theory to make sure that current heritage visualizations and interpretive presentations are not merely building ever more detailed digital castles, cathedrals, and prehistoric landscapes in the air.

Remembering as Contemporary Action

Let's start with the study of collective and individual memory—those basic and most elusive of human faculties presumably at the core of all heritage activities. Jens Brockmeier, a leading memory theorist, summarized the current situation succinctly when he wrote that in recent years we have learned a great deal about memory, but “we do not know very much for sure” (Brockmeier 2010: 5). Despite the confident assurances of such esteemed organizations such as the UNESCO World Heritage Center, Europa Nostra, and the World Monuments Fund that cultural heritage preserves the collective memory of humanity and that the documentation of tangible heritage materials (especially through digital technologies) is “one of the daunting tasks of memory institutions worldwide” (UNESCO Media Services 2015), neuroscientists have developed quite a different understanding of the workings of memory.

The notion that that the human brain has the ability to store and retrieve experiences and facts from the past like a card catalogue or a database has largely been abandoned thanks to advances in imaging of the neural processes of memory itself (Brockmeier 2010). Our memories, the neuroscientists now tell us, are fleeting and constantly recombining constellations of stimuli from different neural structures that come together as needs arise (D'Esposito and Postle 2015). That is to say, we have no permanent, objective memories that exist apart from the particular reason we remember. Whether doing math in our head in a shop or estimating our annual income—even more so remembering a childhood pet or a family outing—no memory comes to us without a context and a specific significance. And particularly relevant to the point I am making is that the emerging neuroscientific consensus is that the boundary between private and

collective memory is extremely permeable (Brown, Kouri, and Hirst 2012). Where once we assumed that collective memories were shared in quite standard forms by members of a generation, a nation, an ethnic group, or religious group through the archiving and conservation of landscapes, monuments, museums, libraries, rituals, art forms, and other intangible expressions whose significance was inherent and unambiguous, collective memory—in other words public heritage—is actually quite a different thing to everyone.

Public memories, equally embodied in local monuments and globally recognized memorials “depend not just on the forms and figures in these memorials,” observed public memory scholar James Young, “but on the viewers’ responses to them.” (2010: 364), and that is a relationship, I would argue, that varies with every visitor and with the passage of time. To put in another way, the late Benedict Anderson’s “Imagined Communities” (2006) are imagined quite differently and for a wide variety of contemporary motivations by every nation, group, and individual. Young’s work has focused particularly on Holocaust sites and memorials, but the following of his assertions is equally valid for monuments of every kind as well as their digital representations:

“artifacts of ages past are invigorated by the present moment, even as they condition our understanding of the world around us. Instead of allowing the past to rigidify in its monumental forms, we would vivify memory through the memory-work itself—whereby events, their recollection, and the role monuments play in our lives remain animate, never completed. It is not enough to ask whether or not our memorials remember the Holocaust, or even how they remember it. We should also ask to what ends we have remembered. That is, how do we respond to the current moment in light of our remembered past?” (Young 2010: 364-365)

So what are memories made of? They are made of meaning. Remembering and commemorating is not merely preserving or digitally reconstructing a mute building or object. Remembering is how at every moment of our lives and our experience as citizens and communities we make sense of what’s happening in the world right now. It’s a spontaneous constellation of facts, sights, and feelings—and the more of them we have and can thus weigh their relative merits in light of our experience, education, and emotions, the more powerful the memory is. If it doesn’t resonate in our hearts as well as our minds and help us understand who we are and assist us in navigating into the murky uncertain future, it’s trivia; it’s entertainment; it’s a curiosity; it’s a selective representation of empirically observed visual attributes. But it is not heritage in the deepest and most profound sense of the word.

The Transformation of the Heritage Mission

So how can we translate the new insights about memory into the practice of digital heritage, and what would its impact be? Although he surely never heard the word “pixel” the great turn-of-the-twentieth-century Austrian art historian Alois Riegl can reasonably

be credited with what I might argue is a still-dominant vision of digital heritage—and certainly of modern cultural heritage itself. Appointed Conservator General of Monuments of Austria, he wrote his classic essay “The Modern Cult of Monuments” (Riegl 1903) as a preface, introduction, and rationalization of the new Austrian monument protection law. In it he was the first to define a widening range of values, of which “age value,” the quality of “pastness,” as Cornelius Holtorf has put it (2013), was visible to everyone (cf. Olin 1985, Arrhenius 2004). Aesthetic value was the province of art critics; historical value was the exclusive province of academic historians, but age-value, “Time’s Visible Surface” as Mike Gubser put it in his work on Riegl (2006), was graspable and understandable by all citizens.

That’s why Riegl insisted that the conservation of the fabric, the stabilization of its outer appearance was the primary responsibility of heritage organizations everywhere. He explained that the care of monuments had until then been entrusted to artists, architects, and craftsmen who had “improved” the structures as they pleased, creating a succession of alterations and style changes. The physical conservation and maintenance of historic monuments, Riegl noted, “until now entrusted essentially to creative artists, who have had to reestablish the originality and lost stylistic unity of monuments, in the future will be provided by historians, who will have to judge and evaluate their historical value as well as their traces of age, and the technicians, who will have to determine and implement the appropriate measures for the conservation of the monument and the traces of the old that are existing in it. There is a place for the artist as such only if he is at the same time an historian and a technician . . .” (quoted and translated by Lamprakos 2014: 425). The oldness of the monuments, like the concept of memory itself in those days of pre-neuroscience, was thought to be an unchanging, unambiguous embodiment of the historical epochs shared as heritage by all Austrians, and presumably, likewise, the same with the monuments of the entire civilized world.

This was the heart of what the museum and heritage theorist Dipesh Chakrabarty has called the “pedagogic” understanding of citizenship, in which “it was assumed that becoming a citizen, possessing and exercising rights, called for appropriate forms of education... Education provided the capacity for discernment — access to high culture that the citizen needed... Universities, museums, libraries, exhibitions and other comparable bodies assumed this task” (Chakrabarty 2002: 5). High culture of this kind, with its authorized canon of aesthetics and historical understandings was seen to be an essential unifying element of national life. And by Riegl’s time, official monuments services were added to the other types of national memory institutions in the ongoing objective of training good citizens.

Now here is where a historical transformation that we are all now familiar with created the paradox between a single, unchanging interpretation (or visualization) and the principle of cultural diversity. Since at least the 1948 United Nation’s Universal Declaration of Human Rights (Morsink 1999), qualification for full participation in public life is no longer a matter of having the right kind of education and cultural sensibility, it is the birthright of all humanity. This, in turn, produced what Homi Bhaba (2004) calls the “performative” approach to civic life—performed by being born as a part

of the human species. And with it came a respect for cultural diversity in which every human group had the right, indeed demanded, to be allowed to see the world through their own cultural lens. And here the parallel with the new, neuroscientific understandings of human memory appears in a dramatically new form in the 21st century.

For while the earlier pedagogical approach assumed that there was a single significance to every monument embodied in its original volume and surface, the performative relies on a fleeting, if vivid constellation of personal sensory stimuli that draws the individual into a fascinated reflection about his or her own role in what I would call the “past-present-now.” It doesn’t rely only on visualization. It certainly doesn’t seek to convey only historical facts. It is not merely dressing up traditional civic education in a photorealistic reconstruction or cloaking it in a digital teaching game.

Now public education is a necessity that is increasingly neglected and underfunded in many countries, and we want—and need—an informed global public that does not fall prey to non-factual myths of once-upon-a-time religious or ethnic purity that almost inevitably leads to intolerance of the Other and the accompanying scourge of violent fundamentalism. But the digital pedagogic approach that concentrates on constructing authoritative representations of “Time’s Visible Surface” does not go deeper than edu-tainment, in presenting a value-less visualization of “pastness” in which the present is graphically distinguished from the visualized and memorized past. Trying to stimulate wider public interest in cultural heritage will never occur more than fleetingly with digital novelties, whose rapid obsolescence, requires a constant flow of new, ever more visually striking representations just to keep up with the quickening pace of the digital age. Heritage interpreters, both digital and analog, must focus more on process than product and I would suggest that the only way to do that is to move from one-way presentations designed by experts and develop new networks of collective memory creation, not merely consumption of pre-packaged historical visualizations and narratives.

Digital Heritage as a Meaning-Making Machine

The ICOMOS “Ename” Charter on the Interpretation and Presentation of Cultural Heritage Sites (International Council on Monuments and Sites 2008), which emerged directly from Ename’s early experiments with digital interpretation, was one of the first set of global heritage policy principles entirely devoted to the general practice of cultural communication—in sharp contrast to earlier guidelines on the interpretation of specific subject matter (i.e. medieval architecture, rock art, or military history) or as a component of a wider heritage activity (i.e. site management, documentation of monuments, or cultural tourism). Moreover, the Charter’s focus was placed firmly on the role of local and associated communities, not only experts, in the interpretive planning process, inclusive representation of all groups linked to a site, and multiple written and oral sources of information, not just the scholarly or scientific facts (Silberman 2009).

Looking back on the Charter now, however, I am convinced that it didn’t go far enough. It is not enough to have a community involved in the planning, in sharing their

stories, and using the interactive digital applications as passive consumers. The days of the pedagogical approach to heritage have given way coming to an age of creative pastiche and hybrid creativity (Giaccardi 2012). Communities—and there is much to be said about whether communities should be seen as remnants of the past or past identities merging in the present (Joseph 2002)—must be full participants in the triad of memory, commemoration, and digital heritage.

Participatory archives of user-generated heritage content in various communities (Flinn 2010), crowd-sourced digital research like the British Museum’s Micropasts Project (Bonacchi et al. 2014), and elicitation of local heritage values as in a participatory mapping project outside Bogota (Allen et al. 2015), are just some examples of a growing body of theory and experience in public heritage engagement that go far beyond a passive gaze into a video screen (e.g. Kikuchi et al. 2014, Oomen and Aroyo 2011, Labrador and Chilton 2009, Mason et al. 2008). They represent ways in which individuals can incorporate feelings of personal involvement and agency in the heritage task. Much more can be said here, but I will conclude by repeating that memories are experienced and felt in the present—not taught or inherited as unchanging truths. In light of this, I would argue that to become a more effective medium of heritage and collective memory, digital heritage should focus less on authentic-looking visual representations of officialized relics and monuments and much more on widening and deepening the web of stimuli, facts, and emotions that come together—quite independent of the experts—to create powerful new memories in both the human mind and soul.

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