On Pause and Duration, or: the Design of Heritage Experience

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This paper investigates ‘pause’ and ‘duration’ as conceptual resources to expand current design approaches to place, technology, and experience in museums to the extended temporality of heritage practice. The author strives to understand ‘through design’ how we come to value objects, places and events through multiple and repeated interactions. In doing so, the author contributes to expand the boundaries of interaction design beyond individuals acting ‘in the moment’ (pause) to individuals and communities participating ‘across time’ (duration) in the cultural production of memory and identity.

Keywords: Cultural heritage, heritage value, experience, extended temporality, pause, duration

1. INTRODUCTION: HERITAGE IN PRACTICE

Generally speaking, heritage practice is about the design of personal experiences and interactions with the things we value. More importantly, it is about enabling people to participate in the **social significance** of objects, places and events, which may or may not be officially recognized as of any particular historical or aesthetic value (West, 2010). From private memorabilia to Vincent van Gogh’s paintings, from the cultural landscape of the Cinque Terre in Italy to the countryside where we used to play when we were children—these are all examples of the different types of heritage we care about, individually or collectively (LeBlanc, 1993).

Like the farmers of the Norwegian Jæren landscape—which as described by Setten (2005) have measured their own farming against those of other family members as well as present and past farmers in their local community—we live and practice heritage within situations that are “personal and yet social, private and yet public, of the present and yet of the past and the future” (Setten, 2005, p. 74). In other words, we socially construct heritage in the context of our own lives and imaginations to interact meaningfully with our past and shape our vision of the future (Thomas, 2004).

This fundamental understanding of heritage practice as **cultural process** emphasizes that heritage meanings and values are not attached to artifacts, buildings or sites. Neither are they frozen in time. They are the results of repeated and ongoing interactions in the **lived world** of ordinary

people (Byrne, 2008). However, while research attention tends to be focused on the construction of personally meaningful experiences, issues of heritage value and social significance have not yet been placed at the core of interaction design practice (Giaccardi, 2011).

In this short paper, I inquire into how we come to value objects, places and events through multiple and repeated interactions. To this end, the paper begins with a consideration of how current design approaches to place, technology and experience in museums emphasize the unique and fairly brief moments of the visit to the heritage—what I call the **‘pause’** represented by the museum space. In contrast, I argue that the social production of heritage experience is the result of a ‘remix’ of our perceptions, memories and hopes according to orders of meaning always open to change—what I refer to as **‘duration’**. Following a research-through-design approach, the paper continues with an analysis and discussion of the natural heritage project called Silence of the Lands (Giaccardi & Palen, 2008). The goal is to identify and contrast elements of pause and duration in the design of the heritage experience of Silence of the Lands, and tease out the conceptual and practical design value of each. The paper concludes with a discussion on the relationship between **‘pause’** and **‘duration’**, and the need to broaden current interaction design approaches to heritage experience (and the design of cultural technologies in general) to issues of **extended temporality**.

2. THE DESIGN OF HERITAGE EXPERIENCE

Current approaches to interaction design in the area of cultural heritage tend to focus primarily on the design of heritage experiences within the exhibition framework of the museum (Dindler & Iversen, 2009; Hornecker, 2010; Lehn et al., 2007; McCarthy & Ciolfi, 2008). By observing and experimenting with how material artifacts are experienced and interpreted in the museum and other institutional settings, this area of research contributes to the understanding of how people sensorially and emotionally engage with heritage objects in public settings. However, because observations and design interventions are made within the power structures of 'legitimate' spaces—that is, in relation to artifacts and sites that are inscribed in official heritage registers—issues of heritage value and social significance have not yet been vigorously addressed by interaction design practice. How do we come to ascribe heritage value to artifacts and sites? How do we develop a sense of connection and commitment towards the things we collectively value, and want to pass on to the next generation?

Dialogical approaches to place, technology, and experience in museums (McCarthy & Ciolfi, 2008; McCarthy & Wright, 2005) emphasize that the construction of personally meaningful experiences in our encounters with heritage is sensitive to the peculiarities of time and space. In other words, when we are in a museum, we interpret artifacts and settings **in response** to previous experiences and **in anticipation** of future experiences. For example, we may respond with irritation to the poor lighting of Caravaggio's 'chiaroscuro' drawings, if in the past we were able to contemplate Caravaggio's drawings in an exhibition setting that was more captivating and suited to accentuate the essential quality of Caravaggio's technique of lights and shadows.

Constrained by the exhibition framework of the museum, this design perspective focuses on engagements "with a particular object at a particular place and time" (McCarthy & Ciolfi, 2008). In other words, though sensitive to the temporal aspects of experience, the emphasis tends to remain on the unique and fairly brief moments of the visit to the heritage—that is, on the '**pause**' represented by the museum space. According to this perspective, museums and heritage settings represent a "point of cumulation" (Wright & McCarthy, 2010) that relies on the continuity of past, present and future experiences. In other words, they constitute the spacetime where habits and dispositions precipitate 'in the moment', and shape our immediate experience of the heritage.

This emphasis on **prospective** (i.e., concerning the future) and **retrospective** (i.e., concerning the past) **elements** of personal appropriation is crucial to support embodied and meaningful encounters with artifacts, places and events. However, contemporary heritage practice (Byrne, 2008; Fairclough, 2009; West, 2010) is drawing attention also to how we build a sense of community and cultural identity around the things we value through long, meaningful connections. These connections are created through multiple experiences, meanings and affects, which diverse people continuously and collectively 'remix' in the cultural space of memory and imagination. Yet, interaction design lacks conceptual and practical resources to support the cultural process through which heritage meanings and values are socially produced, recreated and even contested over time in response to our changing conditions of existence.

Considering these challenges seriously, it requires shifting the focus from the centrality of an individual experience to multiple and repeated interactions within a framework of **extended temporality**. Additional conceptual and practical resources are needed to understand how heritage value and social significance are socially constructed and contested over time, and to bring these temporal and spatial processes to bear on the 'cultural work' of interaction design.

3. DURATION AS EXPERIENTIAL CONSTRUCT

Clocks aside, duration is usually considered a fraction of one's lifetime that the individual perceives as a meaningful unit of time. Because durations have no raw input such as photons in the case of visual perception or sound waves in the case of hearing, there is agreement that the sense of duration is an experiential construct (Petitot et al., 1999). But how are durations shaped by our experience, and why do they matter?

In the *Dialectics of Duration*, Gaston Bachelard (Bachelard, 2000) likes to use music and poetry as metaphors of duration. He argues: "Between one refrain and the next there is less than a latent memory, and less still than a very particular expectation [...] We shall not remember having expected it; we shall simply recognise that we ought to have expected it" (Bachelard, 2000, p. 124). In other words, the meaning and resonance we find in a melody or a poetic composition is an "**emotional reconstruction**" that comes together on very different levels from the one we would be confined to, if we were to consider the objective sequence of sounds or words alone.

According to Gaston Bachelard, this is possible because our experience of time is in reality

fractured and interrupted. Even though temporal events may conserve objective orders of sequence (from the past to the present and the future), we experience a sense of continuity by superimposing temporal events in an order of sequence that is indeed subjective. Each time a new experience comes about, we rearrange (or remix) the events of our life in a sequence that is influenced and shaped by our personal feelings and emotions. Because feelings and emotions are fluctuating and subjective, durations are not fixed: they are always open to **change** as we arrange and rearrange our perceptions, memories and hopes in new **orders of meaning**. In other words, as emphasized also in human geography (Parkes & Thrift, 1980), what matters is the perceived, remembered, and expected order that people give to the world.

A concrete example in the heritage domain is the case of the former Dennawan Reserve in New South Wales, Australia (Harrison, 2010). This case highlights the ways in which a younger generation of Muruwari people with no direct living experience of the site are using its remains (including flattened kerosene tins, enamelled mik jugs and tin cans) to develop connections to each other, and to reconnect themselves with a place from which they were historically excluded (through actions of forced removals and restricted access of the Australian federal government). Invested with intense emotional and spiritual meaning, the remains with which Muruwari people actively interact and perform are the conduit for symbolic and physical interactions between past and present, and for the reconstruction of a sense of community and locality in the ‘abandoned’ site of the former Dennawan Reserve.

For heritage practice, thinking in terms of duration as “order of meaning” provides a useful conceptual resource to consider how a sense of heritage is constructed **across time** and not just over time, through repeated and multiple experiences. Additionally, because a sense of heritage is always constructed within situations that are personal and yet social (West, 2010; Setten, 2005), thinking in terms of duration also helps consider how a meaningful connection to artifacts and sites is continuously and collectively negotiated through the multiple experiences, memories and hopes of many, diverse people.

For interaction design, the idea of duration provokes to create design interventions that enable and encourage people to dialogically engage with the value and social significance of the heritage not just ‘in the moment’, but also ‘across time’ in the cultural space of memory and imagination. This is a critical design challenge for those interested in heritage matters, and for interaction design in general: How can individual, meaningful

experiences be reconstructed and rearranged in collective orders of meaning? How can we enable these orders of meaning to be contested, and eventually change?

In the following section, I probe pause and duration as conceptual resources to deconstruct the design and findings of the natural heritage project Silence of the Lands, initiated by the author in Boulder, Colorado in 2005 and completed in 2010.

3. RESEARCH ARTIFACT: SILENCE OF THE LANDS

Silence of the Lands enabled people to capture and share sonic experiences of the natural environment in which they live, and use these experiences as conversation pieces of a social dialogue about the places they share. The goal was to investigate how aspects of physicality, interpretation and ascribed value combine to produce and evolve people’s meanings and affects in their encounters with natural heritage (Giaccardi and Palen, 2008). Participants in Silence of the Lands could capture their sonic experiences with a GPS-equipped field-recording device, and then create, share and remix soundscapes of the places where sounds were recorded. The result was an acoustic map that changed over time according to people’s perceptions and interpretations of their environmental setting. The project engaged people to connect with each other’s experiences and unfold new understandings of the places in which they live, thus giving voice to a broad repertoire of personal experiences and interpretations with more than 1300 sonic experiences being collected.

By combining mobile computing, collaborative web mapping and a tangible social interface, the project combined elements of sensorial experience, memory and imagination with the goal to create an engaging social dialogue, and sustain it over time. A detailed discussion of the project and the findings of this work, to which I refer in the following paragraphs, can be found in (Fogli & Giaccardi, 2008; Giaccardi & Fogli, 2008).

3.1 On Pause: Designing for Meaningful Experiences

Conceptually, deconstructing Silence of the Lands from a perspective of “pause”—that is, cumulation of experiences—allows us to examine how retrospective and prospective elements were put into effect to create personally meaningful experiences of the heritage. In this case, **we consider a user’s interaction with the natural environment at a specific time and in a specific place**, and how this interaction is affected by the previous encounters one had with that specific environment (e.g., retrospective element): “There

are always airplane sounds at Sawhill Ponds. Right now there are two overhead. One is a cute little red bi-plane”, said a participant walking in a familiar area near home. We also consider how a participant’s experience is affected by her expectations about the pristine or mixed character of that environment (e.g., prospective element): “Wind in the leaves, but... oh garbage truck!”, said a participant hiking on the foothills of the Rocky Mountains.

Figure 1: *Encountering the environment through sounds.*

Practically, designing for meaningful experiences in Silence of the Lands involved enhancing a user’s immediate experience of the natural environment with retrospective and prospective resources, so to enable people to connect to the heritage on a very personal and emotional level. These resources were elicited through (a) the activities of enhanced listening and audio field recording supported by mobile computing (Fig. 1), which enabled to **capture and express embodied practices and expectations** by providing a lens to re-encounter the environment in an unusual way: “I enjoyed the way it called my attention to sounds I might not have attended to otherwise. I have enjoyed those trails more when I walked them after recording there”. Retrospective and prospective resources were also embedded in (b) the color-coded semantics used to weave affective meaning in geospatial mapping and visualization. Color-coded semantics enabled to **make memories and hopes palpable to the user**, allowing her to ‘re-live’ her sonic experiences in relation to the specific time and specific place with which they hold a connection: “Rating sounds make me think about *good* sounds vs. noise + how it differs for me depending on my mood”.

3.2 On Duration: Designing for Shared Engagements

Conceptually, deconstructing Silence of the Lands from a perspective of “duration”—that is, subjective orders of meaning—allows us examine also how people’s multiple experiences come together at very different levels to give resonance, meaning and value to people’s shared engagements. In this case, **we consider how a sense of heritage is constructed and changes in relation to places with which people hold different relations**. In other words, we consider how one’s immediate experience of the natural environment is affected also by the memories and hopes of other people, which have encountered that same place at a different time: “I have always enjoyed listening for natural sounds. I have now more appreciation for some of the more appealing human-caused sounds (e.g. a hiker humming, a group passing by and chatting, kids playing and laughing in the distance).” We also consider how differently someone ‘re-encounters’ the natural environment after engaging with other people’s experiences in the cultural space of memory and imagination: “I learned from their trials. For example, there are not many animal sounds in the heat of the day, I noticed, so I planned to ‘walk’ later in the day”.

Figure 2: *Visualizing patterns of meaning and affect.*

Practically, designing for shared engagements in Silence of the Lands involved **'mobilizing' retrospective and prospective resources**, in order to enable people to connect to each other's experiences and unfold new meanings. This was achieved through (c) sustained activities of collaborative mapping, meant to 'mobilize' and 'remix' the retrospective and prospective resources embedded in the color-coded semantics of geospatial visualization: "I liked going through the red ones, to see what people classified as negative sounds". As a result of these activities, visual patterns emerged, grounded and developed in different orders of meaning (Fig. 2). Patterns of agreement and disagreement, uncertainties and idiosyncrasies appeared and evolved to express and reveal different sets of experiences, memories and hopes within the community of Boulder—engaging the community in a shared process of meaning making through multiple experiential events 'dislocated' across time, and 'superimposed' in always new orders of meaning.

Figure 3: *Expanded infrastructure of conversation.*

Deconstructing Silence of the Lands from a perspective of "duration", though, means also to consider how new experiences (in the form of new hikes and new recordings) are prompted in response to other people's hikes, recordings and interpretations. In other words, it means also to **consider how the unfolding and interconnecting of new experiences and interpretations contribute to the development of the value and significance of the natural environment as heritage**—thus grounding it within a lived and practiced landscape of experiences that are personal as well as social.

Consequently, designing for shared engagements in Silence of the Lands also involved creating (d) an expanded infrastructure of conversation to harness people's tensional flow of experiences, memories, and hopes (Fig. 3). Past encounters with the natural environment, immediate experiences, and expectations about how the environment should be preserved or change in the future: all of this is continuously offered to re-

interpretation in the context of different interaction spaces and through different social practices (e.g., going on a hike, going to the museum, staying home).

4. FROM MEANINGFUL EXPERIENCES TO SHARED ENGAGEMENTS

This is not the first paper to consider issues of extended temporality as an important aspect for the emergence and development of shared values in general (Friedman & Nathan, 2010; Karapanos et al., 2009; Khalid & Dix, 2010; Iversen et al., 2010), and in particular in a museum context (Halloran et al., 2006). However, the conceptualization offered by this paper is based on notions of pause and duration that aim to fully capture the social nature of heritage value, and to provide useful conceptual and practical resources for the design of heritage experience. Putting to test notions of pause and duration in the context of a specific project has provided a concrete case to unpack and assess such conceptualization. It has showed how a design emphasis on heritage experience as 'pause' benefits from the accumulation of personal experiences, facilitating designs that enable people to connect to the heritage on a very personal and emotional level (e.g., enabling them to remember previous experiences, express and 'pin' their expectations, and bring these resources to bear on the construction of personally meaningful experiences). It also showed, though, that reframing extended temporality in terms of 'duration'—that is, as the experiential construction of subjective and always changing orders of meaning—benefits from superimposing the numerous, diverse, and at times conflicting perceptions, memories and hopes of those that hold a connection with the same heritage. This facilitates designs that enable to 'remix' multiple experiences, memories and hopes in a collective process of meaning-making, and to support what I have called the production of **shared engagements**.

In summary, thinking of heritage experience in terms of pause and duration means understanding how immediate perceptions, memories and hopes can be enhanced by design to both 'accumulate' and 'mobilize' experience. As past, present and future are not just 'tenses' but 'tensions', additional conceptual and practical resources are needed to support the design of heritage experience as **cultural process**. These resources must involve a dialogical design orientation toward issues of 'pause' and 'duration', and must harness the discrete and tensional flow of time as it aids to re-compose and re-articulate our past, present and future experiences in support of the development, grounding and evolution of heritage values, meanings and affects.

5. CONCLUSIONS: THE DESIGN OF CULTURAL TECHNOLOGIES

In this paper, I argue for expanding the design of personal and meaningful heritage experiences with designs that also give resonance, meaning and value to people's shared engagements with the heritage. To this end, I propose 'pause' and 'duration' as conceptual and practical resources that extend dialogical approaches to interaction design beyond individuals acting 'in the moment' to individuals and communities participating 'across time' in the social production of memory and identity. Investigation on how to expand the boundaries of interaction design to the cultural sphere by tackling issues of extended temporality is a critical challenge for heritage practice and for the design of cultural technologies in general, which demands further and more aggressive theoretical research and design interventions.

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