## Critical Play, Hybrid Design and the Performance of Cultural Heritage Game/Stories

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In my talk, I propose to discuss the critical relationship between games designed and developed for cultural heritage and emergent Digital Humanities (DH) initiatives that focus on (re-)inscribing and reflecting on the shifting boundaries of human agency and its attendant relations. In particular, I will highlight theoretical and practical humanistic models that are conceived in tension with more computational emphases and influences. I examine how digital heritage games move us from an understanding of digital humanities as a "tool" or "text" oriented discipline to one where we identify critical practices that actively engage and promote convergent, hybrid and ontologically complex technohuman subjects to enrich our field of inquiry as DH scholars.

Drawing on a few concrete examples from heritage games developed within my university research group and in the heritage design network I co-founded (the Designing Digital Heritage Network), I will outline the important connections between DH and games for heritage. I will focus in particular on a local heritage project created as a transmedial children's books series that re-imagines Nordic folktales for local heritage sites and includes a digital Augmented reality tool, as well as another AR experience designed to complement a book and its attendant archival source materials about the development of the Brooklyn Bridge in the 19th C. These examples will enable me to give an overview of core principles about digital heritage games and align them with emerging hybrid DH initiatives to exemplify future development and research directions. This includes research around new digital literacies, collaborative and co-design approaches (with users) and experimental storytelling and narrative approaches for locative engagement in open-world settings, dependent on input from user/visitors.

Exploring principles such as embodiment, affect, and performativity, and analyzing transmedial storytelling and mixed reality games designed for heritage settings, I argue these games are an exemplary medium for enriching interdisciplinary digital humanities practices using methods currently called upon by recent DH scholarship. In these fully hybrid contexts where human/technology boundaries are richly intermingled, we recognize the importance of theoretical approaches for interpretation that are performative, not mechanistic (Drucker, in Gold, 2011): That is we look at emergent experiences, driven by human intervention, not affirmed by technological development and technical interface affordances. Such hybridity, driven by human/humanities approaches is explored more fully, for example, in Digital\_Humanities by Burdick et al (2012) and by N. Katherine Hayles in How We Think: Digital Media and Contemporary Technogenesis (2012). Currently, Hayles and others, like Matthew Gold (2012) offer frameworks for more interdisciplinary Digital Humanities methods (including Comparative Media and Culture Studies approaches) that are richly informed by investigations into the changing role and function of the user of technologies and media and the human/social contexts for use. Hayles, for example, explicitly claims that in Digital Humanities humans " think, through, with, and alongside media" (1). In essence, our thinking and being, our digitization and our human-ness are mutually productive and intertwined. Furthermore, we are multisensory in our access to knowing and we develop an understanding of the physical world in new ways that reorient our agencies and affects, redistributing them for other encounters with cultural and digital/material objects that are now ubiquitous and normalized.

Ross Parry, museum studies scholar, supports a similar model for inquiry and future advancement, based on the premise that digital tool use is now fully implemented and accepted in museum contexts, and so now we must deepen and develop our inquiries and practice (Parry, 2013). He claims that digital technologies have become normative in museums and that currently we find ourselves, then, in the age of the postdigital. Here critical scrutiny is key and necessary to mark this advanced state of change. For Parry this is an opportune, yet delicate juncture that requires a radical deepening of our understanding of the museums' relationship to digital tools:

Postdigitality in the museum necessitates a rethinking of upon what museological and digital heritage research is predicated and on how its inquiry progresses. Plainly put, we have a space now (a duty even) to reframe our intellectual inquiry of digital in the museum to accommodate the postdigital condition. [Parry, 36]

In line with Parry, and with current DH calls for development, I suggest that we should now focus on the contextualized practices in which these technologies will inevitably engage designers and users and promote robust theoretical and practical applications. To that end, I argue that games, and in particular digital games designed for heritage experiences, are unique training grounds for imagining postdigital future development. They could provide rich contexts for DH scholars working to deepen their understanding of performative and active interventions and intra-actions beyond texts and tools. As digital games have been adopted and ubiquitously assimilated in museums and heritage sites, we have opportunities to study experiences of users as they performatively engage postdigital museum sites through rich forms of hybrid play. In such games, nuanced forms of interdisciplinary communication and storytelling happen in deeply integrated and embedded user/technology relationships. In heritage settings, interpretation is key to understanding histories from multiple user-driven perspectives, and it happens in acts of dynamic emergence, not as the result of mechanistic affordance. As such DH designers and developers have much to learn from a rich body of games and heritage research, particularly that focused on critical and rhetorical design for play, Mixed Reality (MR) approaches and users' bodies as integral to narrative design (Anderson et. al, 2010; Bogost, 2010; Flanagan, 2013; Mortara et. al, 2014; Rouse et. al, 2015; Sicart, 2011).

Additionally, MR provides a uniquely layered approach working across physical and digital artifacts and spaces, encouraging polysemic experiences that can support curators' and historians' desires to tell ever more complex and connected stories for museum and heritage site visitors, even involving visitors' own voices in new ways. In combination, critical game design approaches and MR technologies, within the museum context, help re-center historical experience on the visitor's body, voice, and agency, shifting emphasis away from material objects, also seen as static texts or sites for one-way, broadcast information. Re-centering the design on users' embodied experience with critical play in mind, and in MR settings, offers rich scholarship for DH studies and provides a variety of heritage, museum, entertainment, and participatory design examples to enrich the field of study for open, future and forward thinking.

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