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Addressing Torture in Iraq through Critical Digital Media Art—*Hearts and Minds: The Interrogations Project*

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Hearts and Minds: the Interrogations Project is an interactive virtual reality narrative artwork developed by an interdisciplinary team including humanists, social scientists, artists, and computer scientists from four different universities. The project, originally made in the CAVE2™ virtual reality theatre environment[1] at the Electronic Visualization Laboratory at the University of Illinois at Chicago, attempts to extend and make accessible difficult narratives of war and torture based on actual accounts from soldiers involved. *Hearts and Minds* uses VR as a narrative platform to represent a complex contemporary issue and to provide a platform for discussion and debate of military interrogation methods and their effects on detainees, soldiers, and society. We have published on this project previously in computer science and technical venues,[2] as well as digital arts venues.[3]

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[1]See Febretti et al. (2013) for description of CAVE2™.
[2]See Tsoupikova et al. (2015) (SIGGRAPH) and (2016) (SIGGRAPH Asia).
[3]See Tsoupikova et al. (2015) (ISEA).

Our contribution to this volume focuses on the work from an artistic and narrative perspective and on how the work functions as a digital humanities project: one which brings important documentary material addressing an important contemporary problem to contemporary new media environments for critical engagement.

Hearts and Minds makes use of the CAVE2™ environment for a multisensory artwork addressing a complex contemporary problem: as American soldiers are returning from wars in Iraq and Afghanistan, it is becoming increasingly clear that some of them participated in interrogation practices and acts of abusive violence with detainees for which they were not properly trained or psychologically prepared. This project addresses a period of recent American history in which torture was both officially sanctioned and informally institutionalized. *Hearts and Minds* is intended to provide a window into both this institutionalization of torture and its effects on the young men and women who served as its instruments, few of whom joined the military believing they would become torturers. Many American soldiers are returning home with post-traumatic stress disorder (PTSD). American soldiers and citizens are left with many unresolved questions about the moral calculus of using torture as an interrogation strategy in American military operations. By giving voice to and in some ways situating the viewer in the perspective of soldiers who engaged in acts of abusive violence, *Hearts and Minds* further encourages citizens to consider carefully our complicity in acts done in our name.

Hearts and Minds bridges art, computer science, and social science research. Artist Roderick Coover (Temple University) and writer Scott Rettberg (University of Bergen) worked with the research scholars John Tsukayama and Jeffrey Stevenson Murer (St Andrews University) to distill central themes and stories from the significant and extensive research project—based on hundreds of hours of original interviews with veterans—carried out by Tsukayama (Tsukayama 2014). Coover and Rettberg worked with artist and virtual reality researcher Daria Tsoupikova (University of Illinois at Chicago) and computer scientist Arthur Nishimoto (University of Illinois at Chicago) to bring the script to fruition in the CAVE2 at the Electronic Visualization Laboratory at the University of Illinois at Chicago and subsequently in other media environments.

Tsukayama's interviews include revelations of a highly sensitive nature, including narratives of participation in acts of abusive violence that entailed violations of human rights. The interviewees granted Tsukayama the right to use their stories in his dissertation and in subsequent research outcomes derived from it, provided that their identities remained anonymous. The tapes of recorded interviews were destroyed after transcription, except for short samples to prove their authenticity, and Tsukayama did not retain any personal contact information for the soldiers he interviewed. The text was condensed into an accessible and coherent set of stories that would preserve

the accuracy of the testimonies while voice actors would perform the roles of veterans, further assuring their anonymity.

Hearts and Minds as Creative Digital Humanities

We present this work here, in an electronic literature publication, and in a digital humanities research context, in part to argue that work of this kind should be considered in the broader context of the digital humanities. This is not an uncontroversial position. Some would argue that the scope of the digital humanities should be limited to the application of digital tools to traditional humanities subjects. While digital humanities includes applications such as digital editions, text encoding, various applications of computational linguistics, data-mining, visualization, and different applications of GIS and 3D modeling in disciplines such as literary studies, philology, history, archeology, and philosophy, digital humanities are not typically concerned with digital art, nor with contemporary geopolitical or social concerns. Indeed, while we have been engaged and fascinated with the growth and increasing institutional power of the digital humanities in the past decade, it is surprising how little attention the digital humanities per se has paid to digital culture and in particular how the contemporary products of electronic literature and digital art somehow seem to fall outside the frame of "digital humanities" in many contexts. Just as the digital culture of the present will be lacking if it is not engaged with and contextualized by the humanities, digital humanities will be deeply impoverished if it fails to engage with digital art and electronic literature but instead defines itself as a purely retrospective endeavor focused only on using the technologies of the present to consider the cultures of the past.

Hearts and Minds: The Interrogations Project is an artwork and narrative, but one that also functions as a digital humanities project that might serve as a model for future collaborations that bring together digital methods and technologies, social science, arts, and the humanities. Interdisciplinarity is an element of most digital humanities (DH) projects. While anyone working in DH knows that while the word "interdisciplinary" looks good on a grant application, in truth interdisciplinarity is difficult to achieve, and is often uncomfortably situated once it happens. Consider how the work of the digital humanities is divided and valued: how we must balance between technological development, "grunt work" such as gathering, cleaning, and filtering data, with analyzing and writing up that data. When multiple researchers and multiple disciplines are involved, there is always a question of the division of labor and how credit will be apportioned and perhaps even more fundamentally what terms and discourses will be applied to the

given project: whose language will we speak? Sometimes DH projects are interdisciplinary only in the sense that tools and technicians are employed to tackle research questions that are fundamentally situated in the discipline of one principal investigator: the technologists serve the humanist and provide tools to address a particular research question or challenge. A project like *Hearts and Minds* models a different type of "all-in" collaboration, which while difficult is worth pursuing: we entered into the project thinking of it not purely as an art project, and not purely as a narrative project, and not purely as social science research, and not purely as technological research, but from the beginning as all of those together. This has entailed both collaboration and negotiation from the impetus of the project to the present, both between the individual actors involved and the disciplines in which we are institutionally situated.

The *Hearts and Minds* project developed as a result of cross-disciplinary relationships—friendships—as much as anything else. Rettberg knew digital artist and CAVE researcher Daria Tsoupikova from her brief stay with the Electronic Literature research group in Bergen as an intracountry Fulbright lecturer several years before we began the project. They had stayed in touch and planned to work with each other on a future project, and when he had the opportunity to take a sabbatical in Chicago during the spring semester of 2015, she was able to arrange some time for us to work on a project in the CAVE2. Filmmaker Roderick Coover and Rettberg had collaborated on a number of projects film and new media projects together over the preceding several years and he asked Coover to join in developing the new CAVE project. Rettberg and Coover began bouncing around themes and ideas that might work well in the immersive 3D theatre environment of the CAVE2. Our projects have typically centered thematically on contemporary social, political, and environmental challenges. Coover mentioned a conversation he had had with a friend—collective violence researcher Jeffrey Murer—about John Tsukayama's dissertation research on prisoner torture in Iraq. Every collaborator offered a different set of skills and a different disciplinary background to the shared effort.

Project Development and the AudioVisual Approach: Roderick Coover

The visual environment of the work includes 3D modeling and panoramic photography. The project presents the audience with an environment that begins in a reflective temple space with four doors opening to ordinary American domestic spaces: a boy's bedroom, a family room, a suburban back yard, a kitchen. The user navigates the environment. The virtual scene is continuously updated according to the user's orientation. Certain objects

in the room have ambient audio and visual cues which encourage the user to trigger them. Once the given object is triggered, the walls of the room fall away and the audience members find themselves in abstracted desert landscapes—poignant and surreal landscapes of memory. The modified panoramic images which surround the audience at this point—originally photographed at US Army bases in the American West and at Pinochet's prison camps in Chile—reference both battlefield environments and metaphorically suggest a space of interiority. Perhaps most importantly, for the audience these environments function as a "listening space" in which they can hear, focus on, encounter, and confront some disturbing true stories told in American voices.

Hearts and Minds employs creative visual methods as a means to make challenging research accessible and meaningful on differing levels. The project grew out of a series of conversations about the research I had with John Tsukayama and Jeffrey Murer, mostly on Skype. We first addressed questions of how visual methods might contribute to John's research and its reception. While we shared interests in the potential of visual media to give voice and emotion to the data, we also both feared that a more conventional documentary approach risked sensationalizing the material. We were in agreement in a quest to create the space to engage the stories without excessive dramatization.

My approach drew on a combination of methods. One of these methods is drawn from interpretive and visual anthropology—an area in which I have extensive training and experience. Interpretive anthropology offers methods to engage subjective and illusive materials, those of the poetics and rhetorics of language, of performance, of sensation, and of creative expression. Emphases on motifs, objects, metaphors, and other turns of phrases are designed to help ground subjective accounts and provide points of translation. This was very valuable in my work with John. For example, we discussed ways that a common object like a folding chair look on differing meanings for the soldiers and gave meaning to their stories. Away from the home comforts of lounge chairs and sofas, the hard folding chair is immediately a sign of displacement. In the stories, the chairs become tools of interrogation, and in some cases, tools of violence and torture.

As we talked further, this attention to objects in the imagination helped shape the form of the project. Computer games were an important part of the soldiers' experiences. They are important in how young men envisioned the war experience in advance of enlistment; they were—and still are—broadly used as recruitment tools; the interface in some weaponry has close parallels to those of games; and soldiers describe playing games as a form of relaxation away from the battlefield. The games are also places of escape. Our choice to use a gaming format therefore was apt in a number of ways. It evokes the surreality of home and away, and of engagement in real and imagined worlds. It suggests landscapes in which violence is enacted, but it

also mirrors back that violence: the worlds of memories, like those of games, resemble lived experience but also have deformations, disjunctions, and displacements. The form further questions the relationship between play (or indeed industrialized play) and human actions.

The relationship between visual references and language is valuable to pursue in this context. In this case a curious method arises from some other collaborations with writer Scott Rettberg in which we explore combinatory forms, such as in our works *Three Rails Live* and *Toxicity: A Climate Change Narrative*. Those works use code to shuffle images and language. They draw together stories based on scientific study of contemporary environmental conditions with evocative visual environments. The database structure provides a useful way of working through material. An object, such as a folding chair, may have direct references in one scene as an object of torture and placed in another, it returns that references with others with which it might be joined, such as those of a folding chair as an object of travel or an object of ceremony. One begins to describe a web of significations. Attention to the text is required to point to inherent and apt references, to avoid overly elaborated and illusory connections.

A second area of concern was how to conjure from the stories landscapes of memory, and how to place these stories within such landscapes. One aspect of this challenge is that the stories were being told after the war when the soldiers had returned and become veterans. Further, the soldiers' motivations for telling their stories often seemed to involve a difficulty in reconcile differing worlds, the awkwardness of returning home to find that the familiar had become strange. Meanwhile, the landscapes of their memory were frequently incomplete, abstract, and altered. Daria Tsoupikova's 3D modeling artistry in building the home settings would help express levels of defamiliarization in the home environment, while computer scientist Arthur Nishimoto's skills in interaction design and in creating the movements into the memory landscapes could articulate the conditions of travel and translation that are inherent in entering into the world's' stories, memories, and unnamable anxieties. While later this work would involve the extensive visual construction of the memory landscapes and work with actors to bring the stories alive, the next part of the narrative lay with Scott, in condensing John's research into manageable stories.

Project Development and the Writer's Approach: Scott Rettberg

When Rod and I first talked about the materials, I wasn't immediately convinced that we could do justice to the material, and to these soldiers' stories, in a CAVE 3D environment. The type of atmospheres and interactions that we can produce in these visualization environments

are typically game-like and somewhat cartoonish. I was worried that we would risk exploiting the material, trivializing it by putting it into an inappropriate context. However, when we had a Skype conversation about the material and its potential representation in a digital artwork, as well as the limitations of the CAVE VR environment, John and Jeffrey convinced me the project was worth pursuing in this form. They had reached out to Rod because they both felt that the stories the soldiers had told should be heard in other contexts than conventional academic research publications, and they were excited about the possibility of art functioning as a medium to communicate the issues involved to audiences that the research might otherwise not reach. They also felt that a VR environment might situate the audience in a different way than a documentary or fictional film might, by immersing the audience more directly. When we met on Skype, as humanists: writer, filmmaker, and social scientists, we were able to reach a kind of shared consensus and understanding of what was at stake. John writes,

> When Jeffrey Murer told me about Rod Coover's interest in creating a multimedia experience for users to gain insight into some of the experiences revealed in the Detainee Interaction Study, I was immediately intrigued. In working with them and Scott Rettberg I developed a sense that they would honor the trust the veterans gave me that their stories would be treated respectfully and shared with others.

After I read through John's dissertation and the interviews, we had another conversation and at this point the conversation shifted from considering the project as social science research, and as factual testimony, towards considering it from literary and artistic perspectives. John's dissertation traced an arc, a set of patterns and stages in the development of different soldier's perspectives, attitudes, and embodied experiences of participating in or observing acts of battlefield torture. As I began to think about translating the research and how to stay true to its intent, those stages would become a story arc represented through the different rooms that the user encounters in the work. We also considered metaphor. In many of the interviews, the soldiers kept returning to the idea of "home"— in both the battlefield and after they had returned to civilian society, "home" had been on their minds. When they were at war, they felt a sharp disjunction between the reality they faced and the things they were doing in Iraq with their idea of who they were or had been at home. And when they returned from Iraq, "home" was also central to the way they described their experiences. After their return home, they had become estranged from civil society, they had come to feel displaced and unsettled in everyday life. They could no longer feel "at home" in themselves. Out of this discussion, we arrived at the idea that homes, domestic environments and the objects within them, should be the central environmental metaphor of the piece.

Metaphors were also key to the way that the stories are triggered through the user interface. The mundane everyday objects that trigger the stories serve as visual metaphors or icons related to the stories connected to them. This is in keeping with accounts of how victims of PTSD experience the ordinary world as a middle ground between the present and the traumatic past. The sight of everyday objects can trigger buried memories and traumas. We also discussed how to portray this transition "between worlds"—when each object is triggered, the walls of the environment fall away and the environment changes. The 3D domestic environment changes and the user is surrounded by landscapes surrounded by surreal 2D panoramas, surreal landscapes meant to suggest both the battlefield and more strongly perhaps a kind of interiority. Further visual metaphors and cues, such as metal folding chairs, mentioned often in the stories of interrogations, or a child's tricycle, were layered into the panoramic environments. We might pause for moment here to note that in this development stage of the process the conceptual work that we were doing was deeply informed by our background as humanities researchers. Our discussions of how the project should be structured were shaped by not only by our experiences as writer, filmmaker, artist, but also by our research and understanding of how metaphor functions in poetry, in cinema, and in visual art.

To stay true to the voices in the interviews, we decided to change very little of the soldiers' testimonies in their interviews with John in the script. Outside smoothing some transitions, I changed very little with the soldiers' monologues. I decided to put the fragments of testimonies into four voices, composites representative of types roughly characterized in the thesis, but the stories they told were essentially lifted verbatim from the interviews. In this sense the writing involved in the project is not about the creation of story from whole cloth—it is instead a matter of selecting fragments from a large pool of material and providing an architecture for them to fit together and make sense. The writing (or translation) involved is much more about distilling the stories in a way that language is condensed, representative of more than what is actually said. With a background in writing fiction, I sometimes struggle with this in writing for film and media art: my impulse as a writer is to represent as much of a world as possible through the written word. But in writing for media art, one needs to think much more like a minimalist poet, distilling experience rather than using language alone to model a world. While in a novel the written word stands alone on the page, in electronic literature, film, or media art, it is one channel among several. In this case, the visual environment, the human voice, the user's movement and interaction all play signification roles in our experience of the work. Much of the work involved is in balancing and harmonizing these channels so that they don't compete but instead serve each other symbiotically.

Collaboration in the CAVE

As we took the project from the script to realization, each of us played distinctive but separate roles in the project. Once we made the decision about what type of environment we wanted to create, we also made the decision to develop the project in Unity, a popular platform used to develop many contemporary commercial and independent games. One of the advantages of the CAVE2 compared with some earlier projection CAVE environments is that it can support a wide variety of development platforms in both Linux and Windows, as opposed to a platform that is necessarily custom-developed for the particular space. For CAVE artworks this is an important development, as it means works are now transportable from one contemporary 3D visualization environment to another, and importantly to other platforms as well. Although there is a history and an interesting corpus of electronic literature and digital art developed for CAVEs, it has been a great frustration for many working in these environments that because they were typically custom-designed for one specific CAVE, they were often written about more than they were actually seen by audiences.

Developing work for CAVEs was sort of the opposite of work made for the web in this sense: while work on the network was published everywhere on the network at accessible all over the world at the same time, work in CAVES could only be seen in one place by one audience at one time. This new model of works that are portable to other CAVEs and other devices is an important development and may well bring more artists to CAVEs in the future. The Electronic Visualization Laboratory (EVL) was generous in enabling us to have a good chunk of dedicated time in the CAVE2, a facility that is more often occupied by engineers and scientists doing things like examining 3D models of protein chains. But the EVL, the lab that developed the first CAVE, had a long history of collaborations between artists and scientists that stretches back to the 1970s.

Our roles in this project were fairly clearly defined, which made the relatively swift modular development of the various parts of the project feasible. Daria Tsoupikova began to work on the 3D room models, and also brought Arthur Nishimoto, a computer scientist and Unity developer, into the project to begin work on scripting and interaction design. Meanwhile in Philadelphia, Rod was working on the panoramas and with voice actors. Scott, who had been refining the text, scheduled a time to join Daria and Arthur in the CAVE to discuss the structure and designs and they communicated with Rod virtually through Skype. Once a critical mass of the components were together, we all met in Chicago in the CAVE and test out a prototype, the first of the rooms.

Meeting together for four intensive days, we rapidly prototyped the model for the project and tested out various ideas of interaction design, the

use of visual and sound cues, and how movement and audience interaction would function in the space itself. There are iterative contextual shifts involved designing a project like this on paper, in a recording studio, in the Unity platform on the computer screen, to the actualized environment of the CAVE itself. The project didn't move as a finished entity from the screen into the CAVE but in a cycle of testing in the CAVE. We worked physically in the space of the visualization environment, taking notes and identifying problems and ideas, rebuilding and testing again. Working in a CAVE environment was advantageous to collectively experiencing and sorting through the materials. After Rod returned to Philadelphia, we continued this cycle for a number of weeks in Chicago while Rod continued to develop visual elements of the piece.

During the final stages of the project's initial development we shifted from thinking of the work primarily as a playable interactive work, and instead as an interactive performance work. The last part of our development work in Chicago included two performance events in June and July 2014. We asked performance artist Mark Jeffrey to join us in presenting the project. In the CAVE2 what the audience sees is focalized on the perspective of one person, whose movements are tracked in the space—the interactor literally moves physically through the virtual environment and, using a wand, also triggers the interactive events. Seeing a performer encounter the work and make specific decisions about his own movement in response to the digital artwork also changed our perspective on it. While the 3D screens and spoken voice are essential to the CAVE experience, it is also a theater-in-the-round performance, as our attention as an audience is split between the virtual and the physical. We watch and listen to the materials of the digital work, but we also watch the focalized performer. It is also a particularly important aspect of this piece that the members of the audience are also watching with the others in the audience. It is a collective encounter with some disturbing material that reflects back on our society, our complicity in what is done in our name. The fact that we are watching it together with others magnifies some of its effects, and emphasizes our shared responsibilities. The discussions that we share after screening the work are perhaps its most important aspect of the work.

Following successful installations around the world, we then returned to the concept of the playable interactive work as an educational tool and potentially one that could be used to by veteran's groups, human rights organizations, and others to build discourse. In public performances there were always researchers, artists, and invited scholars to discuss the work. Further, public exhibition allowed users to share experience afterwards through conversation. In preparing to release the playable object, the foremost lesson from performances was that such an objection would need context. To do so, we added own reflections on the work through short essays; we invited Jeffrey Murer to add a commentary on his experience, and we solicited additional commentaries from differing fields. Thus, from

the core research the project results in a public experience in artistic and scholarly venues, including immersive CAVE environments, and a work for personal devices that can be used by individuals, organizations, students, and educators.

Conclusion

Systematic abuse is difficult to stop without listening those who lived within it—both the believers and objectors who confront the memories of carrying out the tasks a nation asked of them. *Hearts and Minds: The Interrogations Project* puts us uncomfortably in the shoes of those who have tortured in their country's name and have come back home, in many ways just as broken as the victims of torture themselves. After the revelations of Abu Ghraib, after the US Senate report on CIA torture, and after attempts during the Obama administration to remove torture from approved lexicon of the US military and intelligence apparatus, it may seem unnecessary to ask audiences to return to the memory of this historical period, and instead to dismiss it as a mistake which, once acknowledged, can be dismissed and forgotten as a relic of another time. One would hope that the lessons have already been learned. Instead, in 2016, we found that discussions of torture had returned to the public sphere. The Republican candidate for president not only refused to condemn torture—he actually made torture of terrorism suspects one the main planks of his platform. A surprising proportion of the US population remains receptive to using torture as an interrogation method, in spite of the fact that all available evidence indicates that it is not effective in its stated purpose of extracting useful evidence. It seems the lessons of these episodes have not yet been absorbed into the popular consciousness. There is still much work to be done to communicate the effects that torture has on the people, and the societies, who choose to inflict it on others.

The arts and humanities serve many functions to society, and from time to time—particularly recently it seems—we are called upon to justify the existence of humanities disciplines within university environments that are driving by increasingly utilitarian approaches to education. As humanities researchers we quite naturally resent this interrogation of the practices, research, and pedagogy that we have committed our professional lives to. We come back with the response that one of the roles of the humanities is to serve as an archive, as a part of academia that preserves our cultural memory. Projects such as *Hearts and Minds* ask us to think of that act of preserving memory not only from a comfortable distance, but also in ways that are engaging very directly with the recent past and in the present, functioning as critical digital media as we collectively address our situation within a challenged sociopolitical reality.

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