

# Hearts and Minds: The Interrogations Project

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## ABSTRACT

Hearts and Minds: The Interrogations Project is an interactive Virtual Reality narrative performance made for the EVL's CAVE2™ large-scale 320-degree panoramic virtual reality environment that visualizes stories of violence and the post-traumatic stress experienced by ordinary American soldiers who became torturers in the course of serving their country. During the American-led counterinsurgency and counterterrorism campaigns in Iraq in the years after September 11, 2001, the torture and abuse of detainees was a commonplace tactic.

**Keywords:** Virtual reality, immersive environments, visualization, art, storytelling, digital humanities.

## 1 INTRODUCTION

Hearts and Minds: The Interrogations Project was developed at the Electronic Visualization Lab (EVL) at the University of Illinois Chicago (UIC) for the CAVE2™, the next-generation large-scale virtual-reality 320-degree panoramic environment which provides users with the ability to see 3D stereoscopic content in a near seamless flat LCD technology at 37 Megapixels in 3D resolution matching human visual acuity. The CAVE immerses people into worlds too large, too small, too dangerous, too remote, or too complex to be viewed otherwise [1].

This project makes use of the CAVE environment for a multisensory artwork that addresses 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 has in turn left many soldiers dealing with Post-Traumatic Stress Disorder on their return home, and left many unresolved questions about the moral calculus of using torture as an interrogation strategy in military operations.

The project was developed through a unique collaboration between artists, scientists, and researchers from four Universities. The production team includes filmmaker Dr. Roderick Coover, writer Dr. Scott Rettberg, artist and visualization researcher Daria Tsoupikova, computer scientist Arthur Nishimoto, sound designer Mark Partridge, production assistant Mark Baratta, and senior research programmer Lance Long. Dr. Jeffrey Murer of St. Andrews University, Scotland also contributed as a consultant on the project. The project is based on interviews of American soldiers conducted by political scientist, Dr. John Tsukayama.

## 2 VIRTUAL ENVIRONMENT

The project presents the audience with a narrative 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 performer navigates the environment using a wand, a 3D mouse used to interact with and control a VR experience in the CAVE2. The virtual scene is continuously updated according to the orientation and position of the head, as measured with head and arm trackers, and the 3D view of the scenes is focalized on this perspective. Moving through and exploring each these rooms inside the virtual scene creates a sense of being immersed in the virtual environment. Using a wand with buttons, the navigator triggers individual objects, such as a toy truck, a Boy Scout poster, or a pair of wire cutters. When each object is activated, the walls of the domestic space fall away and a surreal desert landscape is revealed in 2D surrounding panorama, and one of the four voiceover actors is hear recounting particular acts and memory related metaphorically to the object selected. The objects also function very much like hyperlinks in moving us from one narrative element to another. Viewers travel through the domestic spaces and surreal interior landscapes of soldiers who have come home transformed by these experiences, triggering their testimonies by interacting with objects laden with loss.



Figure 1: Hearts and Minds virtual environment and interaction with the immersive scene. Performer wears polarized stereo goggles with markers for wireless tracking and holds wand controller for interaction with virtual objects and the scene.

## 3 DEVELOPMENT PROCESS AND TECHNOLOGY

Through the unique bringing together of differing stories and environments, the project effectively uses visualization to provide conditions for stories to unfold—stories that connect the homes that soldiers come from and return to, with the distant experiences of war. The project bridges art, science and scholarly research. Artist Roderick Coover and writer Scott Rettberg worked with research scholars John Tsukayama and Jeffrey Stevenson Murer to distill central themes and stories from the significant and extensive scholarly research—research based on hundreds of hours of original interviews with veterans carried out by Tsukayama [2]. The text was condensed into an accessible and coherent set of stories that would preserve the accuracy of the

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testimonies, while actors would perform the roles of veterans to preserve their anonymity. Coover and Rettberg worked with the artist Tsoupikova and scientist Nishimoto at the EVL at UIC to transform the exciting and challenging research into an accessible form through visualization. They developed an interactive virtual environment with imagery, 3D models and panoramic photographic backgrounds to bring story elements together. Working across these environments allowed new kinds of connections to be made between home spaces and war fields, and between domestic objects and the memories they become attached to.

Characters, 3D environments, textures, and some animations were developed in Maya (Autodesk Inc., CA). Maya speeds up the production process through its rich selection of tools supporting all stages of the modeling, including surface creation and manipulation, texturing, lighting, rigging, and animation. The visual, auditory, and narrative elements were brought together in the Unity platform, software that is typically used by computer game developers. CAVE2-specific user interaction is scripted using the getReal3D plugin for Unity developed by Mechdyne Corporation. Because the project was developed in Unity, however, it is portable to other interactive environments.

CAVE2 is powered by computer cluster connected to high-speed networks to enable users to better cope with information-intensive tasks. The CAVE immerses people into worlds too large, too small, too dangerous, too remote, or too complex to be viewed otherwise. CAVE2 is approximately 24 feet in diameter and 8 feet tall, and consists of 72 near-seamless passive stereo off-axis-optimized 3D LCD panels, a 36-node high-performance computer cluster, a 20-speaker surround audio system, a 10-camera optical tracking system and a 100-Gigabit/second connection to the outside world.



Figure 2: Hearts and Minds performance in the CAVE2™ panoramic virtual theater.

#### 4 VIRTUAL REALITY PERFORMANCE

In its first iteration, Hearts and Minds was presented as public performances at the University of Illinois Chicago Electronic Visualization Lab in June and July 2014. Chicago-based performance artist Mark Jeffery led a performance of the interactive work. As the audience entered the space, they found themselves in a temple environment, where they listened to each of the four soldier characters' stories of enlistment—why they originally chose to become soldiers and what motivated their perspectives on military service. Jeffery then led the audience to the boy's room, where activating four objects each delivered stories of first encounters with techniques of abusive violence, such as in hazing rituals during basic training, or on first arrival in Iraq. When each trigger object is selected within the 3D visual space, a surreal desert landscape is revealed. This serves both as a metaphor for the interior state of the individual soldier and to

bring audience members into a "listening state" where they can focus on the individual voices and the issues they raise. Objects in a living room space and a suburban backyard move us further into the field of battle, and we encounter there harrowing stories of interrogation, torture, and moral conflicts confronted differently by each of the characters. As the actor moves through the rooms, he carries a steel chair—an object that also plays a role in many of the interrogation stories. As he resituates the chair in the space of the CAVE, he and the audience are transported from one space to another. The fourth room, the kitchen space, features stories told by soldiers of their return home, and how each of them has dealt with the things they did and saw, and how the choices they made have defined and haunted them. As the performance closes, the actor stands in the center of the temple space. The sound of an individual heartbeat is heard as the lighting in the room reddens to hue the color of blood, and then to darkness. The audience is left alone with the stories and issues confronted in the piece. The performance is then followed by a discussion session. During the first iteration of performances, these discussions were intense and reflective. It is hoped that in the future the project will be presented to different groups ranging from high school students to veteran's groups, and that the project will serve to help facilitating change in the processes involved both in developing military interrogation policy and addressing the costs of institutionalized torture both on American policy and on individual soldiers left with deep psychological scars.

#### 5 CONCLUSION

The project attempts to extend and make accessible difficult narratives based on the actual testimonies involved. The immersion the system provides allows for a different type of affective experience of the narrative, activated through the visceral immersion afforded by the visual and auditory environment [3]. The interdisciplinary work interweaves numerous topics including 3D visualization and immersive environments, visualization as storytelling, and digital humanities visualization. The work offers models for engaging with testimony and oral history. It uses visualization to build new discourse around challenging topics and to bridge concept that enable storytelling. While many uses of visualization technologies are focused on providing accessible representation of "big data" in this case, the technologies are being used 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.

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