Virtual Memories of Displacement: A Narrative Game in VR Exploring Refugee Stories through Symbolic Interaction

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Breaking Off is a virtual reality (VR) game that explores the emotional and moral dimensions of displacement through immersive and symbolic narrative design. Players interact with symbolic objects tied to a refugee's personal history, guiding them through a branching story that encourages reflection on migration's human cost. Minimalist visuals and intuitive mechanics focus attention on emotional content, amplifying empathy and narrative impact. This paper presents Breaking Off as an example of how VR can turn complex social issues, such as the refugee crisis, into interactive and emotionally engaging experiences.

THEORETICAL BACKGROUND

The core inspiration for Breaking Off stems from the real-life stories of refugees and displaced individuals, which are often underrepresented or misrepresented in mainstream media. The game takes its narrative cues from the Outcast Europe project, which captures the lived experiences of migrants through personal testimonies and oral histories. These stories provide a raw and powerful foundation for Breaking Off, which aims to offer a personal, reflective lens on the broader issue of displacement. Drawing from these testimonies, the game's narrative is intentionally fragmented, mirroring the disjointed, often chaotic nature of migration.

The game leverages the concept of symbolic interaction (Carter et al., 2016), where objects are not just tools or assets but act as vehicles for meaning, carrying emotional weight and personal significance. The player's engagement with these objects is a form of interaction that transcends traditional gameplay mechanics,

allowing the narrative to unfold through the player's actions and choices. This theory of symbolic interaction emphasizes how meaning is constructed through the player's relationship with the objects, creating an emotional bond between player and narrative.

Projects like Clouds Over Sidra (UNICEF, 2015), The Displaced (The New York Times, 2015), and BBC's We Wait (2016) use VR to portray refugee experiences but rely on linear, passive formats. Breaking Off builds on this work by introducing symbolic interaction and branching narratives, giving users active agency and deeper emotional engagement.

DESIGN AND DEVELOPMENT PROCESS

At the core of the game is a branching narrative (Moser & Fang, 2014) where players make key decisions influenced by symbolic objects. These choices are designed to evoke a sense of responsibility and personal involvement. Players might face a choice involving a backpack representing the past or a family photo prompting a difficult decision. These moments reflect migration's complexity—no path is clear, and each decision has weight.

Figure 1: Breaking Off game: items, abstract memory rooms and map.

The game's minimalist design complements its symbolic focus. The VR environment is intentionally sparse, with limited textures and colors used to guide attention toward the objects central to the narrative. This approach ensures that the emotional core of the story remains the focus of the player's experience. Developed in Unity, the game emphasizes minimalism and cognitive clarity, with adjustable settings to accommodate a range of users.

Breaking Off was developed using the Unity game engine and deployed on the Meta Quest 3 headset, chosen for its mobility, accessibility, and suitability for educational and public use. All 3D assets—including symbolic objects, memory spaces, and environments—were custom-created in Blender to align with the narrative's

emotional tone. Interaction is handled via controller-based selection and proximity-triggered engagement using colliders, allowing players to examine and select objects when within range. Movement is implemented through joystick controls for intuitive navigation through the branching narrative space. The setup prioritizes usability, immersion, and reliable performance.

USER EXPERIENCE AND EMOTIONAL IMPACT

Preliminary testing of Breaking Off was conducted with a small group of five participants (students at the University of the Peloponnese), using the Rapid Iterative Test and Evaluation (RITE) method (Medlock et al., 2002). The goal was to gather qualitative feedback on user engagement, interaction mechanics, and emotional impact. The results of this testing were overwhelmingly positive, with participants noting that the game's symbolic interaction mechanics created a strong emotional connection to the narrative (Table 1).

Aspect	Insights from Participants	Key Observations
User Engagement	Participants found the experience deeply personal and engaging.	Symbolic interaction with objects was a standout feature, enhancing immersion.
Interaction Mechanics	The minimalist visuals helped focus attention on the emotional weight of the narrative.	Simplified interaction mechanics ensured accessibility and clarity.
Emotional Impact	Reported feelings of empathy and understanding of the refugee experience.	Symbolic objects acted as powerful narrative anchors, resonating with participants on a personal level.
Notable Participant Quotes	"The choices felt personal, as if I were carrying the weight of someone's memories."	Abstract memory space and symbolic storytelling were found relatable and emotionally impactful.

Table 1: Players experience on Breaking Off.

Participants reported that the experience deepened their understanding of the emotional weight of displacement, often describing the symbolic objects as "anchors" for empathy and reflection. The immersive nature of VR was central to these responses. Through spatial immersion and first-person perspective, users do not merely observe but embody aspects of a refugee's journey—offering a visceral form of perspective-taking. As Chris Milk (2015) suggested, VR can function as an "empathy machine," enabling emotional experiences beyond what traditional media typically provides. RYOT's immersive journalism similarly places viewers inside crisis contexts to raise awareness and compassion (Pierce, 2016). Empirical research by Herrera et al. (2018) also supports this view, showing that VR-based perspective-taking leads to more sustained and meaningful empathic responses than conventional methods. In Breaking Off, this immersive capacity is intentionally paired with symbolic interaction and branching narrative to foster both immediate emotional engagement and long-term resonance.

Discussion and Reflection

Breaking Off demonstrates how VR can meaningfully address themes of displacement and migration through immersive and reflective design. Its focus on symbolic interaction and branching narrative provides players with a personally resonant experience. Future development will expand narrative pathways, improve accessibility, and incorporate broader user testing. The project illustrates VR's capacity not only to foster empathy but to provoke critical thought, showing its potential as a medium for social awareness and storytelling rooted in emotional and experiential engagement.

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REFERENCES

- Carter, Michael J., and Celene Fuller. "Symbols, meaning, and action: The past, present, and future of symbolic interactionism." *Current sociology* 64, no. 6 (2016): 931-961.
- Moser, Christopher, and Xiaowen Fang. "Narrative control and player experience in role playing games: Decision points and branching narrative feedback." In *Human-Computer Interaction. Applications and Services: 16th International Conference, HCI International 2014, Heraklion, Crete, Greece, June 22-27, 2014, Proceedings, Part III 16*, pp. 622-633. Springer International Publishing, 2014.
- Medlock, Michael C., Dennis Wixon, Mark Terrano, Ramon Romero, and Bill Fulton. "Using the RITE method to improve products: A definition and a case study." *Usability Professionals Association* 51, no. 1 (2002).
- Herrera, F., Bailenson, J., Weisz, E., Ogle, E., & Zaki, J. (2018). Building long-term empathy: A large-scale comparison of traditional and virtual reality perspective-taking. *PloS one, 13*(10), e0204494.
- Milk, C. (2015, March). *How virtual reality can create the ultimate empathy machine* [Video]. TED. https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine
- Pierce, D. (2016, July 13). *RYOT's virtual reality films put you inside the world's crises*. WIRED. https://www.wired.com/2016/07/ryot-darg-mooser-disaster-vr/
- UNICEF. (2015). *Clouds Over Sidra* [Virtual reality film]. United Nations Children's Fund. https://cloudsoversidra.com/
- The New York Times. (2015). *The Displaced* [Virtual reality experience]. The New York Times. https://www.nytimes.com/2015/11/08/magazine/the-displaced-introduction.html
- BBC. (2016). *We Wait* [Interactive VR experience]. BBC Research & Development. https://www.bbc.co.uk/taster/pilots/we-wait