
Blur - Challenging Virtual-Reality's Sense of Reality

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Abstract

*Blur*¹ is a virtual-reality experience exploring the topic of the boundary between "illusion" and "reality". Being immersed in an enclosed and endless hallway and triggering a series of uncanny events, the player of *Blur* has to face a situation where assumptions about the reality are constantly defied. Such defiance is designed to lead the player to the uncomfortable realization that seeing is not believing.

Author Keywords

Virtual Reality; Narrative; Design Fiction; Game Design; Uncomfortable Interaction

CSS Concepts

• **Human-centered computing** → Human computer interaction (HCI) → Interaction paradigms → Virtual reality

Introduction

Blur is an interactive single-player virtual-reality experience. The goal of this experience is to experiment, challenge, and create reflections on virtual reality's ability to create the sense of reality. Among existing media technologies, virtual reality has been publicized and widely received as the powerful

¹ A demo video of this experience can be viewed at https://youtu.be/hgKTn9_q-7A

apparatus that provides the greatest sense of immersion, presence, and thus reality. Instead of using this power to simulate the reality and reinforce the immersion, this project aims to take advantage of this power to break people's assumptions about reality and turn the familiar into unfamiliar.

The goal of this experience is to engage the players in a particularly uncomfortable and uncanny way, such that the breaking of assumptions constantly creates the ruptures in the immersion but, at the same time, the visceral-ness of the virtual reality medium constantly brings them back into a mode of "seeing is believing". Furthermore, we hope the oscillation between the two different modes of engagement to create meaningful reflections about the power of virtual reality, the symbolic meaning of some objects appeared in the experience (e.g. mirror, hallway, etc.), and even the philosophical question of what is reality, what is illusion, and how our perceptions mediate them.

Experience

The experience starts with the player standing in the middle of a long hotel hallway, facing a wall with an exit sign at the end. The player cannot directly see his/her body in the space, and the only allowed interaction is moving within the space. Behind the player is the other side of the hallway which extends to infinity and waves up and down. The player's position marks the start of the wave. A monotonic computer-generated voiceover narration prompts the player with hints of navigating the space during the experience.

If the player decides to walk toward the endless and wavy side, the narrator will talk to the player three times implying going this direction is chasing illusion,

each with a different narration. The discordance between visually wavy floor and the physically flat space that the player walks on in reality should also cause mild dizziness and discourages the player from going too far into this direction. Additionally, there is an invisible teleport mechanism that translates the player back if the player walks too far into the wavy end.



Figure 1: Endless wavy hallway



Figure 2: Hallway end with "EXIT" sign

When the player walks to the side with an exit sign, the exit sign will disappear, and the player will see a mirror

instead. From this mirror, the player's hands will become visible, the endless wave in the hallway will disappear and become flat, and the player will also see a male waiter-looking character walking toward him/her. The hands, flat floor, and the waiter are only visible through the mirror, creating an asymmetry in and out of the mirror and challenging the symbolic meaning of "mirror". When the waiter inevitably meets the player, he will pat the player's back and say "You're fooled." to end the experience.

Design Ideas and Decisions

Interactions

Hallway - This experience is contained within a hotel hallway, which has an end on one side and extends infinitely on the other. The hotel hallway is a familiar space, but its repetitive pattern, seclusion, and unidirectional extension creates a sense of surrealism, claustrophobia, and disorientation. The co-existing comfort and discomfort registers the theme of uncanny-ness. The hallway is also a reference to great films like *Paprika* [1], *Inception* [2], and *The Shining* [3].

Wave - In this experience, the floor on the endless side of the hallway is wavy, and the boundary between the wavy flat floor shifts as the player moves. Wavy floor is an intentional experimentation of the sense of immersion afforded by the medium of virtual reality, because walking on a visually wavy but physically flat surface (in reality) can be physiologically dizzy. Creating such dizziness is one of the unique powers of virtual reality, and, aiming to explore such power, we integrate the dizziness into this experience to 1) script the player so that walking toward the wavy direction

become unfavorable, 2) thematically represent the floating, limitless, and ephemeral nature of illusions.

Mirror - The end wall of the hallway turns into a mirror when the player is close enough. This mirror is special in that the waves on the floor are not seen in it (to imply they are illusional), and the player's hands and the ghost can only be seen in the mirror (to question which side is more "real"). The mirror is used for two purposes. First, the mirror bears the assumption that one should see a reflection of the world in it, and this assumption is intentionally challenged and brought to awareness in the experience. Second, the object of mirror has always been symbolically related to illusion, self-reflection, and identity in the discussions of the psychology and philosophy, therefore it is a meaningful motif to reinforce the theme.



Figure 3: Player touches the mirror with "ghost" and flat floor in the back

Ghost - The waiter-looking character, who approaches the player and can only be seen in the mirror, behaves like a ghost. Its purpose is unclear, and the player has no way to stop or redirect it, so the approaching of this

ghost can feel threatening. It exists in the scene to evoke human being's visceral response when seeing potential danger approaching, as another manifestation of the virtual reality's power of creating realistic illusion. When the ghost meets the player, it will pat the player's back and say "you are fooled" to bookend the theme and question whether seeing is believing.



Figure 4: "Ghost" patting player from the back at the end of the experience (seen from the mirror)

Player - In this experience, the only allowed interaction of the player is walking. This lack of control and power puts the player into the mode of passively experiencing the environment and the events, instead of actively making changes. Putting the player into such a vulnerable and passive position is desirable because the lack of power and agency is more likely to translate to self-reflection and contemplation.

Environment

We plan to build up the sense of oppressiveness and uncanny-ness as the experience evolves. Therefore, the visual style and aesthetics of the environment should provide a sense of familiarity on the surface and let the

unfamiliar grow out of familiarity as the interactors uncovers the rules of this world.

To achieve the familiarity, low-key and commonplace room doors, paintings, wall lamps, plants, carpet, and the warm and low-contrast lighting are used to create a welcoming atmosphere that resembles a hotel. These unassuming elements are repeated and endlessly extended to infinity. As the floor starts to wave, and the mirror and ghost shows up, the sense of oppressive-ness and uncanny-ness builds up when the player finds him/herself imprisoned with the "ghost" amongst all the commonalities.

Narration

The narration used in the experience serves the purpose of 1) scripting the player to go to one direction and 2) prompting the player to reflect on the questions that this experience aims to explore. The identity of the narrating voice is not introduced and remains open for interpretation. A synthesized and indifferent machine voice is used to narrate the lines to register a sense of alienation and indifference.

Conclusion

As a virtual reality experience, *Blur* aims to exploit the medium's ability to create the sense of immersion and reality, and at the same time problematize the sense of immersion by intentionally creating discomfort and breaking assumptions. We hope such awareness provides the players with an opportunity of self-reflection, through which some fundamental questions about the virtual reality medium and our perception can be asked, such as to what extent are we really "fooled" by the illusions, and where do our perceptions sit between "reality" and "illusion".

Acknowledgements

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References

- [1] *Paprika*. 2006. [film] Directed by S. Kon. Japan: Madhouse.
- [2] *The Shining*. 1980. [film] Directed by S. Kubrick. US: Warner Bros.
- [3] *Inception*. 2010. [film] Directed by C. Nolan. US: Warner Bros.