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### Immersion in Video Games: The Effect of Audio and Visual Narratives

The video game industry has experienced an incredible growth in technology and cultural significance over the last twenty years. What started out as humble beginnings in games such as Pac-Man and Pong, has evolved into an entirely new form of interactive story-telling media. A large portion of this success can be attributed to what many people call a game's level of "immersion". While both visuals and audio in video games work together in order to craft a believable experience for the player, the quality of one in comparison to the other may drastically alter the immersion experience. However, which part of the game's presentation plays a larger role in the player's enjoyment of the game?

Perhaps the most important question to address is what immersion in a video game is. The term immersion is most often defined as the perception of being physically present in a non-physical world, and depends highly on the individual player's level of suspension of disbelief. Whether the game falls more into the realm of tactical, strategic, or narrative immersion, all serve a purpose of grasping the player's attention and imagination to convince them of the reality of the game's world. This combination of immersion types to portray a believable world that the player feels present in can also be defined as spatial immersion. For a game to have a high level of immersion, convincing visuals and well-designed audio often work together to craft the world the video game takes place in. However, some debate over whether the visual narrative or audio experience do more to immerse the player.

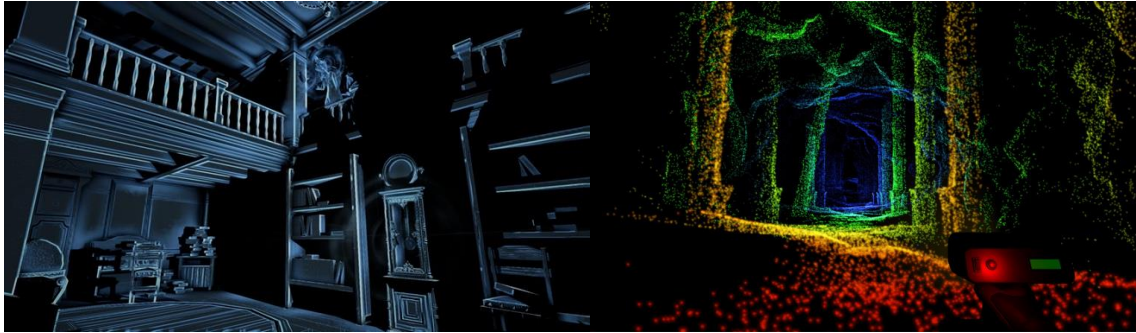
Humans are a very vision based species. We evolved to be able to discern even the most miniscule variations in color and depth to survive, and as such much of our daily lives are influenced by what we see. Therefore, it is logical to assume that a game with colorful, contrasting, or well-crafted visuals would grab a person's attention and help to immerse them in the game they play. For example, Super Mario Bros., an icon among games, seems toned down in comparison to more modern video game experiences. However, when it was released in 1985, it stood out due to its colorful visuals and unique character designs among the other arcade games of the era. This caused the game's popularity to skyrocket, and has continued the franchise into the modern day.



*(fig. 1: 3D Starstrike, 1985; fig. 2: Sorcery, 1985; fig. 3: Super Mario Bros., 1985; A more colorful palette and well-designed levels helped engage players in comparison to other games of the time.)*

Although there has been a breakthrough among the video game media in pushing the boundaries of what makes a video game a "game", and in certainly improving the programs behind building more realistic and engaging visuals beyond what was once thought possible, there has yet to be a game crafted with absolutely no visuals. However, games involving blind protagonists, such as Perception, have used the playable character's lack of sight to craft an interactive world, where the visuals are only seen when a sound is generated, similar to echolocation. Another such game, Scanner Sombre, relies entirely on the player to fill in and

craft the landscape around them, with only audio clues giving the player ideas as to the environment they are in. This stylization of visual narrative can enhance the game experience if done well, however a lack of visuals can also serve to separate the player from the game.



(fig. 1: *Perception*; fig. 2: *Scanner Sombre*; Both games rely on a lack of visuals to tell the narrative of the game.)

Many games that rely on visuals as a main part of their narrative can achieve a breaking of immersion with a sudden lack of visuals, bringing the player back to reality and in only watching the screen upon which the game is taking place. If a playable character is to fall asleep or be captured, or even during a scene change or loading screen, the sudden fade to black in an otherwise visually stimulating game serves as a moment of pause in the visual narrative. Unlike in film, where a fade to black can serve as a storytelling method for the passage of time or scene transition, a video game is not a passive experience in which a lack of visuals can be easily accepted. The player is an active participant, and if immersion is broken by the visuals disappearing, if even for a moment, the player is taken immediately out of the immersive experience. However, it is not only the lack of visuals that can break the immersion of a game. Sometimes even slight changes to the visualization can cause a change in immersion. According to video game designer Toby Gard:

When we are creating worlds in games, immersion is only possible for the player if we can convince the players that the space is *authentic* (whether stylized or not). If the

critical features on screen don't match up with the critical features of the player's schemata, then he or she will not be fooled by it. (Gard).

Although visuals play an important role in video game immersion, there are some who say that the audio provides more to envelop the player in the game's world. While most games can certainly be played without any audio, many players find that doing so can create a dull, almost chore-like experience. Games have fine-tuned the art of composing music that can define the atmosphere in a scene, or instill a sense of victory and achievement when one completes a task in the game.

Of course, it all depends on the game's audio in question. Games with a more synchronous audio narrative can melt into the background, becoming entirely unnoticed by the player. Such audio can improve immersion in a game, as the player does not have to pause and contemplate the sound they are hearing, instead just continuing on with the game. If a game were to use more abstract, dissonant audio, then the player would be immediately pulled out of the immersive experience. Very few genres of games achieve a well composed audio track that ties in with the game.

One notable genre of games that rely entirely on sound are rhythm and dance based experiences. Perhaps the most famous of such a game, Dance Dance Revolution, relies entirely on the music of each level to capture a player's interest and continue playing. Without the soundtrack, I find the game to become monotonous, and players would lose interest quickly in the repetitive movements that consist of the bulk of the game. A more recent example, Thumper, relies on very minimalistic visuals in a dark environment, with only the continuous music and occasional visual cues serving as guides for how the player should interact in the game.

Of course, some of the most well-known games praised for their audio narrative are those in the horror genre. The 2010 game Amnesia: The Dark Descent revolutionized the horror genre in the way sound played into the game's experience. With no method of self-defense, players were forced to rely on audio cues to know when an enemy was approaching, when they had been found, and even when the main character was beginning to go insane from fear. The audio narrative crafted in this game immersed players in the horror taking place like very few games before it, and to this day still inspires methods for new horror games in composing their audio.

Two more modern games, both with similar styles of audio storytelling, are Limbo, and a newer addition to the genre, Little Nightmares. Both have a fairly straightforward game mechanic: guide a small child through a nightmarish world towards their unknown goal. The audio in Limbo relies upon a steady, bass noise, very similar to pink noise, throughout the soundtrack to instill a feeling of unease in the player. The audio narrative of Little Nightmares contains clues to the player's location in the environment, as well as the location of enemies and steps to important puzzles.

With both audio and visuals playing such important roles within games, it can be difficult to determine which may be a more influential component of immersion. However, I have discovered through researching the effects that both audio and visuals have in games, that more people lose immersion when the audio is degraded than when the visuals lose quality. A game can be played with very basic visual components, however if the audio narrative is substandard or altogether missing, a player's immersion in the game can be completely detached. With this knowledge, I look forward to seeing what the future holds for game audio, and the effect of immersion it brings upon a new era of interactive media.

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