# DARK WATERS: SPOTLIGHT ON IMMERSION

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**ABSTRACT**

This paper combines several empirical studies and some theoretical research to shed some light on the dark, undefined waters in which we plunge when we are "immersed". Immersion, across all media, comes in three different types and in three different degrees, and can be hindered by barriers, such as inaccessibility, or favored by fuel, such as using one's imagination. The resulting model of immersion can be applied to experiences formed by any type of media object, but is particularly relevant to video games.

## INTRODUCTION

Immersion is one of those words we keep hearing when we talk about video games. A problematic aspect of the term, however, is that it can take on a variety of senses depending on the author, text, and context. Consider, for example, the following usages of the term:
- "The sound and lighting effects actually made me feel like I was part of the scene."
- "I am totally immersed in the story, I can't wait to see what is going to happen next."
- "I have been playing for so long that I don't even see the game pieces anymore, only the patterns of play."

Those three examples have something in common that we can call immersion, using Janet Murray's general definition of "the sensation of being surrounded by a completely other reality […]that takes over all of our attention" [8]. Yet the three examples cited above are all very unique experiences that rely on different mechanisms. I will therefore build upon the work done so far by other scholars and propose a refinement and combination of multiple theories on immersion in order to better understand this "excessively vague, all-inclusive concept"[7].

## THREE TYPES OF IMMERSION

Laura Ermi and Frans Mäyrä have built a gameplay experience model which they call the SCI-model[6]. This model establishes three types of immersion: Sensory, Challenge-based, and Imaginative. Their model seems adequate enough to describe the experience of a player going through a video game-playing session, so I will use it as the main framework for studying the phenomenon.

Sensory immersion, as its name implies, attempts to focus the senses: "Large screens close to [the] player's face and powerful sounds easily overpower the sensory information coming from the real world, and the player becomes entirely focused on the game world and its stimuli". Challenge-based immersion occurs "when one is able to achieve a satisfying balance of challenges and abilities." Finally, Imaginative immersion is described as occurring when "one becomes absorbed with the stories and the world, or begins to feel for or identify with a game character."

> "For example, multi-sensory virtual reality environments, [..] or just a simple screensaver, could provide the purest form of sensory immersion, while the experience of imaginative immersion would be most prominent when one becomes absorbed into a good novel. Movies would combine both of these. But challenge-based immersion has an essential role in digital games since the gameplay requires active participation: players are constantly faced with both mental and physical challenges that keep them playing." [6]

### Fictional Immersion

The first of two amendments I would like to suggest is to name Imaginative immersion "Fictional Immersion" instead. The reason for this change is that we can be immersed in a story without exercising our imagination. Cognitive psychology and the reader-response school in film studies and literary theory have shown that the consumption of a media object is never completely passive; in fact, readers and spectators are constantly mapping mental schemas and building sense from what is presented to them, forming hypotheses on the outcome of the plot, attributing motives and backstories to characters, piecing together the physical setting of the action, and likewise exercising their "active creation of belief"[8] in order to enjoy immersion. [1, 2, 3]

However, to say that this is making usage of one's imagination is to render the concept of Imaginative immersion "excessively vague and all-inclusive", in McMahan's words, since we are constantly evaluating things and situations according to mental schemas. By not taking the criterion of fictionality into account, the concept of immersion suddenly becomes so broad that it loses relevance. To avoid this sort of theoretical dead-end, we need to distinguish between "using one's imagination" and "immersion". We can see the act of using our imagination as a measure taken among others in order to accomplish Fictional immersion. Besides, Ermi and Mäyrä's definition of Imaginative immersion ("one becomes absorbed with the stories and the world, or begins to feel for or identify with a game character.") implicitly relies on the concept of fictionality. The best way to describe Fictional immersion is to take the illusionist conception of realism that Marie-Laure Ryan presents: it strives to make us feel that

"there is more to this [the fictional, represented] world than what the text displays of it: a backside to objects, a mind to characters, and time and space extending beyond the display." [10, p.158]. The term "Fictional immersion" is narrow enough to prevent the pits of Imaginative immersion, yet broad enough to include all forms of storytelling, like narration and representation, found in video games.

**Systemic Immersion**

The second modification I propose to make to the SCI-model concerns Challenge-based immersion. The argument for this type of immersion is that video games require active participation, and henceforth, are challenging. There are, however, many ways to experience a form of challenge in traditional, non-participatory media. The viewer of a whodunit TV show, for instance, constantly forms hypotheses and tries to interpret the clues so as to find the culprit before the show gives it away. The learned cinephile who watches a movie and notices the intricacies of lighting, camera angles, and similar details of construction, is in a state that is very similar to the chess master that sees the patterns of pieces on the chess board. But where does it tie in with the concept of immersion?

Taking Murray's metaphorical definition and extracting its fundamental idea, I believe we can define immersion as a phenomenon that occurs when a layer of mediated data is pasted upon the layer of unmediated data with such vividness and extensiveness that it blocks the perception of the latter. Immersion occurs when one gazes at a painting, listens to music, is lost in a book or absorbed in a game of chess, so much that he ceases to perceive the museum or the sounds of the street, forgets the events happening in the real world, and suspends his knowledge of its laws.

Systemic immersion occurs when one accepts that a system (of rules, laws, etc.) governing a mediated object replaces the system governing a similar facet of unmediated reality. To think about the player's avatar's chances of survival in a typical RPG in terms of Hit Points, Attack values and such rather than torso and arm size, weight of the weapon, etc., is to adopt the game's system and reject the laws of real-world physics (unless, of course, the game system does take into account the arm size and weight of the weapon rather than Hit Points and Attack values, in which case the reasoning is reversed). Similarly, the learned cinephile that examines the shots of a movie is attempting to schematize and decipher how the mind of the director works. Learning a language is a similar effort, as the expression "linguistic immersion" asserts. As a non-native English speaker, for instance, I need to immerse myself in the proper "English" mindset before writing this article; however, once I am thinking in English, I do not find it hard to write. Since one can be immersed in a system without necessarily being challenged by it, the term "Systemic immersion" seems more adapted to design this experience.

So far I have suggested a classification of different types of immersion, which would transform the SCI-model to a SSF-theory. Another issue has been raised by Elena Gorfinkel in a conversation on immersion: "Immersion is not a property of a game or media text but is an effect that a text produces."[11] It is crucial to remember that for a media object to qualify as immersive, it does not have to be so at all times and for everyone experiencing it. Indeed, as Ryan notes in the form of the water metaphor, most objects alternate between immersive and reflexive stances throughout their course: "The ocean is an environment in which we cannot breathe; to survive immersion, we must take oxygen from the surface, stay in touch with reality." [10, p.97] These opinions join the body of work done by multiple scholars who argue that immersion is also a matter of degrees, and a matter of individual experiences. I will now integrate this notion into the SSF-theory of immersion.

**THREE DEGREES OF IMMERSION**

Emily Brown and Paul Cairns' study of immersion using Grounded Theory[4] provides us with three degrees of immersion: engagement, engrossment, and total immersion. Each level can only be reached if certain barriers are removed:

**Engagement** necessitates investment from the player (in time, effort, and concentration) and accessibility (the game is not of a type that the player avoids like the plague, features responsive controls, etc.). It makes the player want to keep playing.

**Engrossment** follows engagement, provided the game does not suffer from bad construction (visuals, interesting tasks, and plot are given as factors of construction). Once they reach this stage, players become emotionally invested: "The game becomes the most important part of the gamers' attention and their emotions are directly affected by the game."

**Total immersion** is, according to Brown and Cairns, a synonym of "presence", and occurs when the player can empathise with the game characters and feel the atmosphere of the game. For an adequate atmosphere to exist, "The game features must be relevant to the actions and location of the game characters." When players enter this stage, they are cut off from reality and the game becomes the only thing that affects them.

While good, this classification suffers from a confusion among the types of immersion I have presented above. One barrier given that prevents total immersion is an impossibility for the player to identify with the game characters. It is, however, entirely possible to experience total sensory or systemic immersion while playing *Doom*, or even Atari's *Battlezone*, two games notorious for their absence of plot and characters. Hence, total immersion is not exclusive to story-oriented games. (see Ermi and Mäyrä's measure of all three different types of immersion in a single game session. [6]) The barriers to the last degree of immersion need to be reconceptualized so as to apply to each of the three types of immersion. This is, however, an enterprise that far exceeds the scope of this paper, and is best left for future work; furthermore, the barriers system is a negatory tool: it tells us what can prevent immersion, but not how to achieve it. I would like to pursue this exercise of integration and study the elements that actively contribute to immersion.

**"GIMME FUEL, GIMME FIRE, GIMME THAT WHICH I DESIRE"** – Metallica, *Fuel*

Essentially, one can always reach the deepest level of immersion as long as no barriers stand in the way. The process

is, however, much easier and quicker when fuel is on hand. Fuel is any activity, or the positive qualities, both in the player and the game, that contributes to make the player advance through the degrees of immersion. These can be either specific to a type of immersion or general. For instance, Murray's "active creation of belief" is fuel for fictional immersion, and so is "using one's imagination". "General fuel", on the other hand, favors multiple types of immersion.

**Information Load, Expectation, and Coherence**

David Nunez studied the question of whether or not the data provided by an object needs to be sensory in order to contribute to immersion. [9] He found that immersion is hindered or favored by two things: expectation and information load. The former's link to immersion is that "realism" is a recurring term among many scholars who seek to understand how immersion can take place, and Nunez, citing cognitive psychology studies, argues that expectation is a better term to use: "we will perceive of something as realistic if it is in line with our expectations of what one will find in that particular setting." As for information load, "Whether a virtual environment is capable of matching the user's expectations seems to be a function of the amount of information presented to the user." The framerate or amount of visual detail in *Doom 3*, the amount of diegetic information such as books and dialogs in *Morrowind*, and the high number of statistics, character classes and different possible strategies in *Final Fantasy Tactics*, all are specific fuel for the three types of immersion.

The information load, however, needs to be handled or assimilated correctly by the user, whose capacity to do so depends on his level of mastery of the channels through which the information is transmitted. Just as the casual movie-goer will probably lose interest if he watches a 3-hour long characterless and plotless film on the aesthetics of Deleuze versus Metz, the average 70-year old female would likely not be able to digest *Halo 2*. Information load is fuel as long as the user has a tank large enough to hold it.

A curious aspect of immersion has also been found by Kevin Cheng and Paul Cairns[5]. Their study was based on the idea that "One particular barrier to immersion was thought to be caused when the different aspects of the game did not cohere across different modalities.", a result of Brown and Cairns' 2004 study cited above. They examined the experience of a group of players that were playing a game programmed by them to have the laws of physics of its world change and become incoherent at some point. The surprising result is that "immersion overcame the deleterious usability elements. Due to immersion, participants completely failed to notice what had been determined to be modal incoherence – a mismatch between graphical and behavioural realism compared to what the participant expected." This suggests that as players become more immersed, their spectrum of expectations also broadens, which means that immersion could be viewed as a feedback loop: the more immersed one is, the easier it is to become even more immersed.

**CONCLUSION**

This model of immersion, which started from the SCI-model and evolved to integrate three types of immersion, three degrees, and factors that positively and negatively influence it, may not seem to accomplish much, but it is a solid foundation. Future works on it can take on a variety of forms, such as redefining the barriers to total immersion. I am personally interested in expanding the types of immersion to include subdivisions. Marie-Laure Ryan's temporal, spatial and emotional immersions seem like good candidates for subcategories of Fictional immersion. In the meantime, this paper has shed some light on the dark waters of immersion.

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