Immersion

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Definition

A “highly intensive state” where “one is fully absorbed within the activity, and often loses one’s sense of time and gains powerful gratification.”

“Immersion means becoming physically or virtually a part of the experience itself.”

Immersion can happen within any activity; elements that create immersion vary:

- Watching a movie: the score, the narrative, and the acting.
- Playing a sport: In team games, monitoring other people, the objective.

These same elements can also break immersion.

In Video Games

Many elements of video games can create a sense of immersion:

- Gameplay
- World/Levels
- Music/Sound Effects
- Voice Acting
- Art Direction/Animation

Likewise, these same elements can destroy immersion.

Additionally, things like glitches and long loading times can also ruin any immersion/continuity in the game.

Examples (Subjective)

Good Examples:

Skyrim: The music, voice acting, gameplay, and map make the world of Skyrim incredibly satisfying and immersive.

Undertale: Witty writing, music different based on route, come to appreciate the various characters in the game. Your actions affect the gameplay and the story much more than other games.

Bad Examples:

Xenoblade Chronicles 2: Bad voice acting, bad character design, plot could be better, fast travel at any point in the story.

Sonic 06 - Incredibly buggy gameplay, long loading times, bad story, bad voice acting, etc.

Different Types of Game Immersion

The different types:

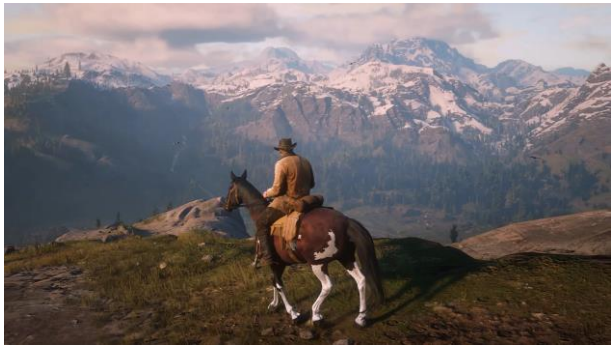
Sensory immersion - relates to the audiovisual execution of games, and how audiovisual elements form a cohesive gaming experience.

Challenge-based immersion - “The feeling of immersion that is at its most powerful when one is able to achieve a satisfying balance of challenges and abilities.”

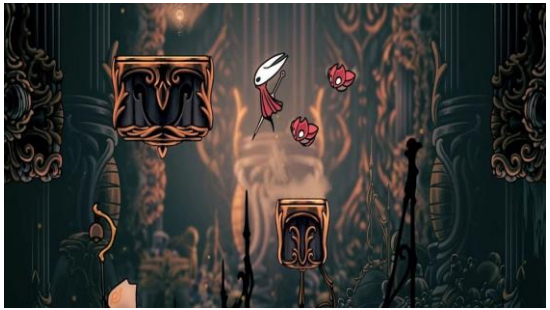
Imaginative immersion - “the area when the player “use[s] their imagination, empathise with the characters, or just enjoy the fantasy of the game.”

Audiovisual Examples

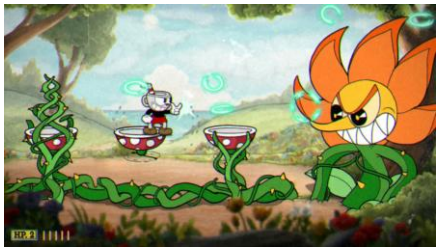
Red Dead Redemption II: One of the most gorgeous games to have ever come out, music fit the aesthetic incredibly well



Hollow Knight: Incredibly expressive and adorable artstyle, fantastic soundtrack

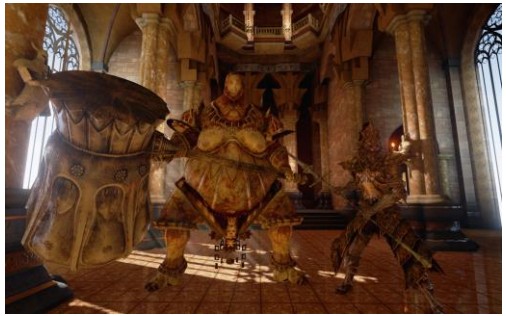


Cuphead: 1930’s cartoon aesthetic, jazz music, exaggerated animations and artstyle fitting the aesthetic

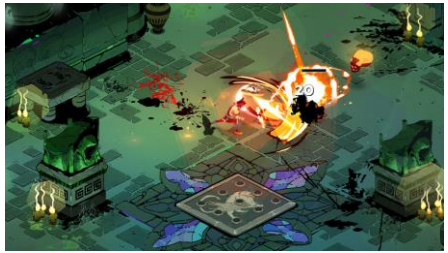


Challenge-Based Immersion

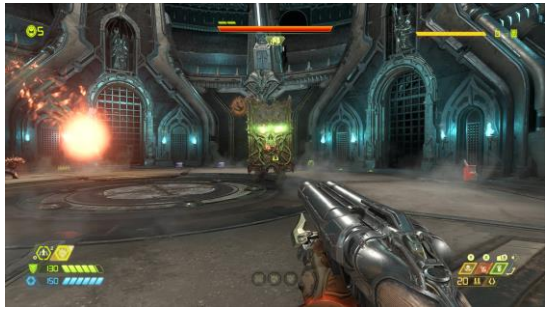
Dark Souls: Difficult adventure RPG that has spawned its own genre due to its unforgiving yet satisfying combat.



Hades: Incredibly difficult roguelike where you improve your character by getting new abilities, which improves your chances of getting out of the Underworld.

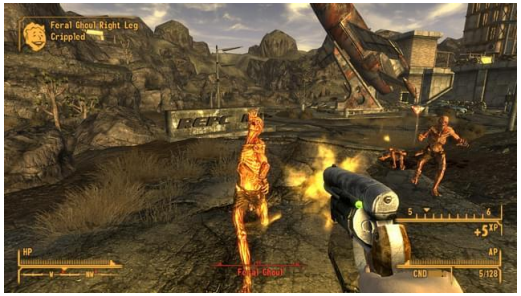


Doom Eternal: A FPS game where you fight demons from hell. While difficult, the game system rewards precision, skillful play, and quick thinking.

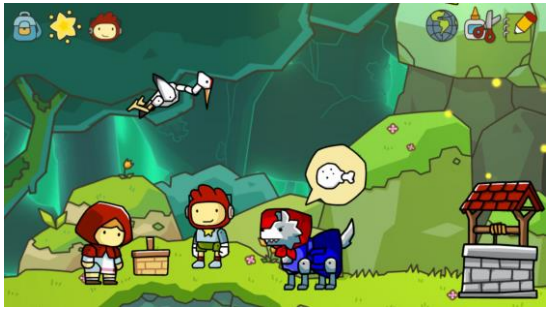


Imaginary Immersion Examples:

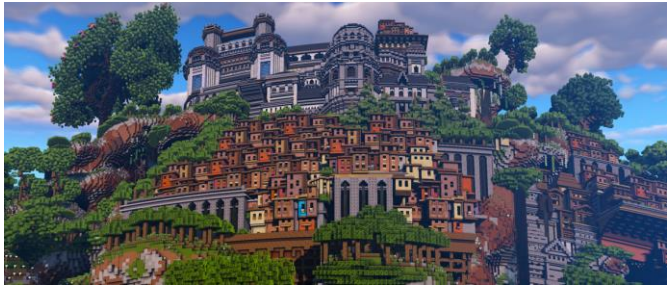
Fallout: New Vegas: You play as a mail courier in post-apocalyptic Nevada. You can join different factions, do various sidequests, and there's high roleplay potential.



Scribblenauts: You spawn various objects by writing them down, which allows you to interact with them and use them to solve various puzzle.



Minecraft - Allows you to build pretty much anything using blocks.



Music As A Way To Immerse

Music score is incredibly important as an element of immersion in video games.

Can even be a deal-breaker if it doesn’t fit or is not good.

Example:

- Fire Emblem: Three Houses
- Medieval turned-based RPG
- Immersive because the music transitions between the map theme and the fighting theme.
- The fighting theme is more bombastic, adds extra percussion and horns, whereas the map theme is calmer.

The Participants

- 80 undergraduate students were selected from survey
- 40 participants had more exposure to video games ("high gamers")
  - played 32.3 hrs per week on average
- 40 participants had less exposure to video games ("low gamers")
  - played 7.6 hrs per week on average
- Age of participants about the same in both groups

Experimental Design

- Participants were paired based on previous exposure to video games
- Both participants in the pair were placed into separate rooms
- Game played was King of Fighters
  - fighting game, participants played against each other
- Played game for 20 minutes
- After playing, performed three tests:
  - Time distortion
    - Two types of time distortion - prospective and retrospective
    - Participants asked how long they felt they were playing the game
  - Stroop Task
    - Participants given series of colors with words but might be some dissonance, need to choose the right color of the word
  - Questionnaire
    - Participants asked series of questions about how immersed they felt in the game

Results

Game experience	With background music		Without background music	
	M	*SD*	*M*	*SD*
High gamers	96.00	11.85	96.15	13.39
Low gamers	103.25	12.33	91.00	14.31

Table 1: Means and standard deviations of immersion score from questionnaire.

Game experience	With background music		Without background music	
	M	SD	M	SD
High gamers	793.60	122.08	711.18	107.62
Low gamers	804.11	120.37	723.39	142.80

Table 2: Means and standard deviations of reaction time in Stroop test.

Game experience	With background music		Without background music	
	M	*SD*	*M*	*SD*
High gamers	16.65	4.82	17.20	6.12
Low gamers	14.50	3.31	19.60	3.56

Table 3: Means and standard deviations of time perception in video games.

Summary of Results

- Ran two-way ANOVA to measure differences
- In general, "low gamers" had higher amounts of immersion
  - In all three metrics
- On the contrary, no differences were found for the "high gamers"
  - Paper hypothesized that they were "desensitized" and "their emotional reactions to video games tended to be attenuated or blunted"
- Negative correlation between the questionnaire and the time distortion
- However, no correlation between questionnaire and Stroop task

Limitations Acknowledged by Paper

- Researchers running the experiment felt that the Stroop task was not a good metric for determining immersion
- Unclear how the effect would change the participants were paired with participants from the other group
- Only tested retrospective time distortion, could test prospective
- Tests were given in a specific sequence, rearranging the tests might give different results
- Further research on how the music relates to the game and different volumes of music would be good
- Paper suggests that current measurements of immersion are not the best

Criticisms

- Experiment seems to lack a good control
- Only ran experiment on males
- No random sampling of participants
- Time distortion testing might be better if some level of randomness involved
- Experiment paired participants, unclear how the other person may or may not affect immersion
- Only tested one video game with one type of music

Thank you!