rpgs game elements and their influence on immersion

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Abstract

The paper will use several methods and frameworks, like Calleja's Involvement Model and Vella's 'avatar-character' to explore immersion in contemporary computer role playing games. To do so two case studies will be examined: *Citizen Sleeper* (Jump Over the Age, 2022) and *Disco Elysium* (ZA/UM, 2019). The paper will also propose a working definition of the term 'ludonarrative dissonance', linked to the aforementioned involvement model.

Together with Bridle's philosophy these theories will be used to examine exactly how, by challenging the genre convention, the two games manage or fail to influence player involvement and incorporation.

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Introduction

Rpgs are a broad and hard to define category of games, and the same is true for the academically controversial term of immersion. To try to restrict the space of research the literary review will describe in detail how these terms are interpreted and used.

It is important to understand from the beginning however that the research questions explored in this paper focus mostly on Computer Role Playing Games (crpgs), in particular or recent iteration of the genre. Despite this, many of the references and terminologies reviewed and used may borrow from tangential fields, as there is much overlapping between the different fields of studies and sub categories of the rpg genre.

To begin we can immediately see that the elusive term "role-play", which is by inheritance a strong part of the computer rpg as will be later explored, is intrinsically linked to that of immersion.

Role-play is "a media, where a person, through immersion into a role and the world of this role, is given the opportunity to participate in and interact with the contents of this world" [1]

Immersion in a role and its world is then clearly vital to the experience of an rpg, but exactly how does this take place?

More importantly, for the purposes of this paper, how do specific systems inside the computer rpg influence the immersion? Which shape should these components take to achieve immersion for the player?

These questions have been sparked by some recent case studies, Disco Elysium (ZA/UM, 2019) and Citizen Sleeper (Jump Over the Age, 2022). Both of these games have many of the traditional crpg characteristics, making them suitable cases to analyze the genre, but at the same time they innovate and change some key features, allowing us to point out the changes and their consequences.

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[1] Henriksen, T., 2002. Hvordan kan man lære gennem fiction? Teoretiske perspektiver på læring gennem deltagelse i rollespilsformidlet fiktion, specialesamlingen, Det kongelige bibliotek, Institut for psykologi, Københavns Universitet.

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The paper will therefore use many lenses to analyze and discuss the effect on immersion in these two games, and will try to extrapolate generalized conclusions for the rpg genre.

The key theories that will uphold the thesis are Calleja's Player Involvement Model, the critique on computation simulation found in James Bridle's *New Dark Age* (Brindle, 2019) and Daniel Vella's concept of the Player-Avatar.

While Callejas and Vella's work serve the purpose of defining the concept of immersion in the perspective of the player in order to avoid ambiguity and to redefine other concepts, such as ludonarrative dissonance, the concepts present in *New Dark Age* will be used to structure a critical approach towards simulations; this will be useful to give meaning to the designer's intent, especially in the case of Citizen Sleeper.

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Literary review

From immersion to involvement, incorporation

Immersion is a controversial word inside game studies due to its lack of specificity. In his 2012 GDC talk Calleja[2] mentions four main issues with the concept:

- In its uses in the English language the term is ambiguous, as it has two meanings, to be absorbed in and to be surrounded by. Both of these terms are true when talking about games, but while the first might be more broad, the second one is what has been described as 'presence'[3], that can be described as the feeling of being in a place you are not - particularly when mediated through technology.

- Calleja also talks about "the book problem" where he argues for the radical difference between video game immersion and other forms of focus on other media: inhabiting a digital environment is different from immersion in a book, as the digital space acknowledges your presence.

- Immersion can also not be circumscribed as a technical issue: a bigger screen doesn't necessarily make you more immersed.

- Finally one can be immersed and describe the experience of immersion in several different ways, making the umbrella term imprecise.

Due to these criticalities Calleja formulated a model[4] to redefine immersion from its roots, passing through involvement and arriving at incorporation, which will be

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[2] Calleja, G. (2012). *Beyond Attention: The Player Involvement Model. GDC 2012.* San Francisco.

[3] Yee, N. (2006). The demographics, motivations and derived experiences of users of massively-multiuser online graphical environments. Presence: Teleoperators and Virtual Environments, 15, 309-329.

[4] Calleja, G. (2007). Digital Game Involvement. *Games and Culture*, *2*(3), 236–260.

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what we consider as 'immersion' for the purposes of the paper. In the model Calleja uses involvement as defined by him in the 2012 GDC talk, or the intentional wielding of attention towards an object, considering the emotional responses of the subject. According to the model there are 6 types of involvement that form an hexagon:
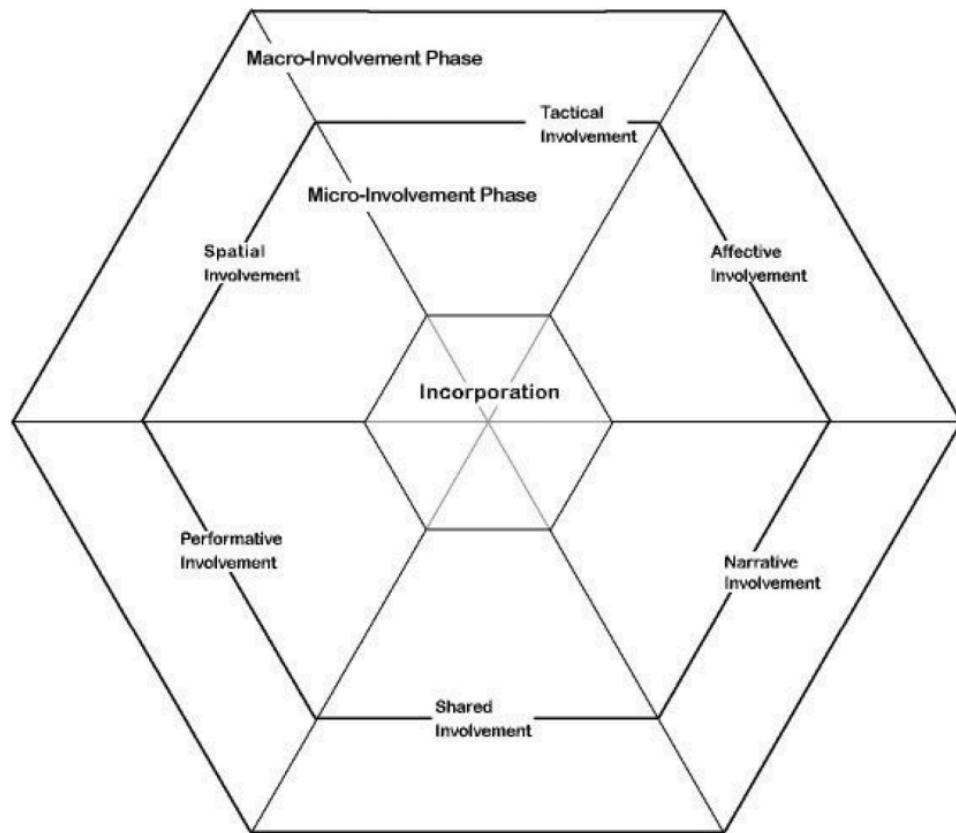
- kinesthetic or performative → dealing with the simulated sensation of movement
- ludic or tactical → generated by the rules interaction and choices they offer
- affective → risen by aesthetics, it alters player's emotions
- narrative → scripted or made up by the player's mind
- shared → involvement that works on the social sphere
- spatial → pertaining exploration of an environment and mapping

In the paper Calleja explains how:

"The experience also occurs with various degrees of intensity, with frequent fluid shifts in attention between one element and another." [4]

To paraphrase it the player, consciously or not, exerts effort in directing attention towards a particular kind of involvement, and when a critical level of attention is invested in a focused way 'Incorporation' happens. Incorporation is dualistic in nature, and as a concept tries to solve the aforementioned issues with immersion.

"Incorporation operates on a double metaphor: incorporating (in the sense of assimilation or internalization) the environment while reincorporating (in the sense of corporeal embodiment) the player through the avatar in that environment. Both aspects of the metaphor need to be satisfied simultaneously" [4]

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It is vital to understand how, according to Calleja, since the player has only a limited amount of attention resources, if the attention shifts towards another type of involvement, the resources invested will have to be removed from somewhere else, potentially leading to a loss of incorporation.

Douglas Schules, Jon Peterson, and Martin Picard commented that:

"One of the defining features of modern CRPGs is the importance of story to play. Unlike larps or TRPGs, however, CRPG stories unfold through interaction between the player and computer rather than between players." [5]

Due to this emphasis on rules and narrative, while I acknowledge that crpgs also tackles other types of involvement, the main focus will stay on narrative, ludic involvement and their dialogue during gameplay.

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[5] Schules, D., Picard, M., & Peterson, J. (2018). Single-Player Computer Role-Playing Games. In *Role-playing game studies: Transmedia Foundations* (pp. 107–129), Routledge.

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The avatar-character

Focusing now on the player, two concepts have been used to define it, avatar and player character. They are both defined by Daniel Vella as:

"By this point, it should be amply clear that both terms – 'avatar' referring to the formal game component acting as the player's embodiment within the gameworld, and 'player-character' referring to the nonfactual individual enacted within the textual world – are both indispensable." [6]

Vella, recognising the indispensability of both of the point of view and their incredible nature, creates the term 'avatar-character' which takes into consideration both aspect of embodying a virtual entity.

"the avatar-character, compound of the two is - the primary means by which the player is given the tools to construct her persona within the gameworld – a persona which, to a great extent (allowing, of course, for varying degrees of freedom within prescribed confines) is determined by the affordances – or, in the terms of Merleau-Ponty's embodied phenomenology, the 'I can's – structuring the player's engagement with the gameworld."

The implications here are clear: the player for embodyment inside the game world are limited by what the game world allows and doesn't allow, creating a reciprocal imposition between game and player.

"… the affordances granted to the avatar – and hence the mechanics of its relation to the gameworld – determine the player's mode of being in that world."

This reciprocity calls back, as Vella himself mentions, to Calleja's incorporation[4], that in order to address the issues with immersion encoppasses both the embodiement of the avatar and the absorption of the environment in the player's mind.
The avatar-character, together with incorporation, can therefore be used as a framework to imply the necessary influence that game systems and environments have on the player.

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[6] Vella, D. (2013). "It's A-Me/Mario!": Playing as a Ludic Character. Foundations of Digital Games Conference Proceedings, 8, 31-38

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To further add legitimacy to this hypothesis we can cite the work of Athanasios Karavatos[7], where he found through survey that players experienced a strong influence on narrative not only by game elements intrinsically about story, like voiced dialogue, but also by rules, such as being instanced or open world.

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[7] Karavatos, A. (2017). 'WHAT IS YOUR DPS, HERO?' : Ludonarrative dissonance and player perception of story and mechanics in MMORPGs. (Dissertation)

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Rpgs and their main elements

As stated in the introduction of this paper defining rpgs has proved challenging for both designers and academics. Zagal and Deterning have written a paper[8] collecting definitions and analyzing the nature of the genre, and their conclusions are necessary fragmentary.

To start role playing games have their roots on general role-play; one of the definition present in their paper is:

> Role-play is "not a single well-defined activity but a whole species of activities grouped under a convenient name. At one end of the spectrum is the intensive 'acting out' of personal emotions. ... At the other ... is the situation where 'taking the part' is closer to the concept of advocacy"[9].

It is interesting to point out that even this definition admits its vague nature.

In order to build a coherent argument this paper is focussing only on a particular kind of role playing games, single player computer role playing games - called crpgs in this paper.

Zagal and Deterning try to categorize the various kinds of rpgs, and by doing so they give a hint towards an understanding of what crpgs actually are.

Thanks to surveys done in the research the, two researchers concluded that most crpgs include:

- A single player plays with a computing device.
- The player creates and governs the actions of one or more characters in a fictional game world.
- The computer runs an internal model of the game rules and game world, including all NPCs, renders a representation through an interface, and updates model and representation in response to player input.

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[8] Zagal, J. P., & Deterding, S. (2018). Definitions of Role-Playing Games. In *Role-playing game studies: Transmedia Foundations* (pp. 19–51), Routledge.

[9] van Ments, Morry. (1981). Everyone Plays a Part: An Account of the Use of Role-Play in a Neighborhood Workshop Project. In Simulations and Games: The Real and the Ideal (Perspectives on Academic Gaming & Simulation 6, 21–33). London: Kogan Page Ltd.

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- The game world is constituted by the computational models generating audiovisual representations that ground the player's imagination
- The game world is usually some form of genre fiction: fantasy, science fiction, horror, or a mixture thereof.
- Attempted character actions are limited to options made available through the game interface.
- The abilities of characters and the outcomes of their actions are usually determined by quantitative-probabilistic rule systems or by the player's reflexes and abilities in inputting commands.
- A game is often played over multiple sessions
- In-game events are usually guided along a pre-planned plot through the extensive scripting of the game world (including non-player character actions) toward clear end points, but players may play open-endedly before, during, or after the conclusion of those plots
- There are extensive rules for combat resolution.
- Player characters improve over time via systems for progression.

Of course these are only a basis to understand their ever changing nature. In fact:

"One of the defining features of modern CRPGs is the importance of story to play. Unlike larps or TRPGs, however, CRPG stories unfold through interaction between the player and computer rather than between players."[10]

It's on these changes that the discussion will aim towards, in particular tackling the combat system element and the quantitative-probabilistic outcomes in relation to the narrative.

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[10] Schules, D., Picard, M., & Peterson, J. (2018). Single-Player Computer Role-Playing Games. In *Role-playing game studies: Transmedia Foundations* (pp. 107–129), Routledge.

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Ludonarrative dissonance as framed by the Player Involvement Model

In 2007 Clint Hocking[11] published the influential and controversial analysis of Bioshock (2K, 2007). There the term 'ludonarrative dissonance' entered the mainstream discourse on gaming. Since then the term has been used and abused, but not in academic context, where the lack of in depth research behind the concept has led toward relegating it to journalists and professionals.

In the article Hocking pointed out how the meanings created by the explicit narrative of the game were clashing with the mechanics of the game, creating an incoherence that prevented him from enjoying the game.

I am going to argue that what Hocking described and experience was none other than a forceful removal from incorporation as defined by Calleja: the player, while investing attention to reach incorporation through narrative involvement, gets their energies shuffled during gameplay, where the ludic involvement takes charge, diminishing the attentions present in narrative involvement. This passage is especially traumatic if what the player experiences while absorbed ludically are antithetical to their narrative involvement, putting a block that hinders further enjoyment of the narrative.

Of course further research would be required to prove these arguments, but in the context of this paper, when I will mention ludonarrative dissonance, I will mean this forceful removal from a state of involvement from another type of involvement that also prevents further involvement of the first kind.

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[11] Hocking, C. (2007). *Ludonarrative dissonance in Bioshock.* Click Nothing. Retrieved July 22, 2022, from https://clicknothing.typepad.com/click_nothing/2007/10/ludonarrative-d.html

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The militaristic roots of rpgs and their influence

We have already determined, using the concept of the avatar-character, how game systems and their affordances have an influence on the player's perception of the game world and, consequently, on involvement and incorporation.

What I want to concentrate on now is on how game rules can be intrinsically limiting, due to their computational nature and their militaristic origin. This latter truth is undeniable: in *Games of Empires* (2009), the authors Greig de Peuter and Nick Dyer-Witheford put under the spotlight the fact that all of the contenders for the invention of the videogame were employed by the American military-complex[12], from William Higinbotham, creator of the first paddle like game, to Steve Russels, programmer of *SpaceWar!* (1961). More specifically, RPGs have their origin in wargames. Matteo Lupetti writes in an article for Not Magazine[13]:

"If Gygax and Chainmail gave to Dungeons and Dragons the base for its rules, it's Blackmoor of Arneson... ...to create the idea of "role playing", of interpreting a specific character making it grow and improve thanks to its actions and to the objects found during the adventure, and moving it in a world imagined and described by a "dungeon master"."

All of the cited games are heavily influenced by wargames like *Kriespiel[14]*, used to train prussian soldiers at the beginning of the 19th century.

In the essay *New Dark Age* (Bridle, 2020), the author James Bridle points out the issues with our contemporary statistic driven society:

"A simply functional understanding of systems is insufficient; one needs to be able to think about histories and consequences too. Where did these systems come from, who designed them and what for, and which of these intentions still lurk within them today?"[15]

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[12] Dyer-Witheford, N., & Peuter, G. D. (2009). *Games of empire global capitalism and video games*. University of Minnesota Press.

[13] Lupetti, M. (2020, June 4). *La Nuova era Oscura Di Disco Elysium: Not: Nero*. Not. Retrieved July 21, 2022, from https://not.neroeditions.com/la-nuova-oscura-disco-elysium/?fbclid=IwAR3bVLQdQaPaAh2be9R8VEy_eRwFWLPuYVNGBKNHlN9umFxmFkZNjjLJEFU

[14] Jon Peterson (2012). *Playing at the World: A History of Simulating Wars, People and Fantastic Adventures, from Chess to Role-playing Games*. Unreason Press.

[15] Bridle, James (2019). *New dark age: Technology and the end of the future*. VERSO BOOKS.

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The previous quote is to insert in the context of a rejection of a world ruled by technologies that try to predict the future with simple computational models, even when, at best, they can provide a range of probabilities. This of Bridle has deep consequences on our lives, for example the numerical evaluation of employees done by Amazon, which expects them "to behave like robots". Of course I will not dare to accuse every simulation in an rpg to carry imperialistic meanings that harmfully shape our society, but it is important to note how the way we represent things influence their meanings. To further build on what previously stated in regards to the influence of the game world and system on players I'll cite Jesper Juul:

"Games resist many of the more complex themes we can imagine, such as love, ambition, and social conflict, because they are not implemented in the rules. When games are actually about these things, the actions that the player can perform are often simple, but the 'complex' events in the game are only present in the fictional world, or happen as a result of the player's simple actions […] This shows that the technical issue of what is readily implemented in rules and/or programming influences the content of the fictional worlds of the video game." [16]

If we aim at achieving complex themes and achieve greater levels of narrative and affective involvement, one must then pay attention to the actions and systems used to communicate them: systems are not neutral in meaning.

"What is needed is not new technology, but new metaphors: a metalanguage for describing the world that complex systems have wrought." [13]

Combining then Juuls statements with Bridle's philosophy we can understand that languages and systems developed to structure a certain hyper rational reality, born out of military needs, may not be the best solution to communicate themes and actions such as love or morality - both of which are a staple of rpg's game elements.

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[16] Juul, J. (2011). *Half-real: Video games between real rules and fictional worlds*. MIT Press.

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Case studies analysis

Disco Elysium

Disco Elysium (ZA/UM, 2019) is a crpg developed by UK based studio ZA/UM. The game, while remaining unambiguously an rpg, has been praised by the critics for its novel approach at narrative design and for its themes. The game received three BAFTA awards, to confirm its positive reception: best audio, best debut game and best narrative[17].

The game puts the player into the shoes of an amnesiac detective - useful narrative trope to align the player and the avatar views of the world - tasked with investigating a murder in a run down city block. The district, called Martineise, mimics characteristics of our own world immediately post world war: the failure of great ideologies, class struggles, cities run down by war and ruled by imposing centrist governments.

The setting is used to explore the psychology of the character in relation to the politics of the context: the player will not have the possibility to align with evil or good, like in a traditional tabletop roleplaying game, but with centrist, sovranist, communist or neoliberal politics.

This is only one of the ways that the game builds on what is expected by the genre. The game still has:

- A character progression system.
- A probabilistic way of resolving conflict linked to the player statistics.
- An inventory system, which also influences player statistics.
- A companion to the main character to frame and contextualize the narrative.
- An explorable three dimensional world with a flowing concept of time.

However the game uses this characteristic, which match those described by Zagal and Deterding in their paper defining rpgs[18], in radically different ways.

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[17] *Disco Elysium - Narrative*. BAFTA. (2020, April 2). Retrieved July 20, 2022, from https://www.bafta.org/games/awards/narrative-0

[18] Zagal, J. P., & Deterding, S. (2018). Definitions of Role-Playing Games. In *Role-playing game studies: Transmedia Foundations* (pp. 19–51). essay, Routledge.

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For example the game doesn't have a staple of the genre, the combat system, focusing on verbal sparring instead. The progression system and statistics are also framed accordingly: the character skills will not be linked to weapon proficiency or arcane spells, but to personality traits and psychophysical peculiarities. The player, as part of their progression, can literally equip 'thought': diegetically the avatar will internalize them, and, when enough experience points are accumulate, he will internalize the thought, providing a statistical bonus and adding knowledge of the game world that will expand that of the player - though the action of the avatar-character.

Disco Elysium (ZA/UM, 2019) is therefore a perfect case study to analyze changes made to the traditional rpg formula manifest as different kinds of involvement.

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Citizen Sleeper

In many aspects *Citizen Sleeper* (Jump Over the Age, 2022) is similar to *Disco Elysium* (ZA/UM, 2019): the game has player statistics and uses probability to resolve conflicts, they both have an inventory and a three dimensional world. Also *Citizen Sleeper* (Jump Over the Age, 2022) avoids a traditional combat system in favor of other conflicts.

However the game, which puts you in the shoes of a cyborg who has the cloned personality and memories of a human being, differs in many contrasting ways that make the juxtaposition of the two games useful to this study.
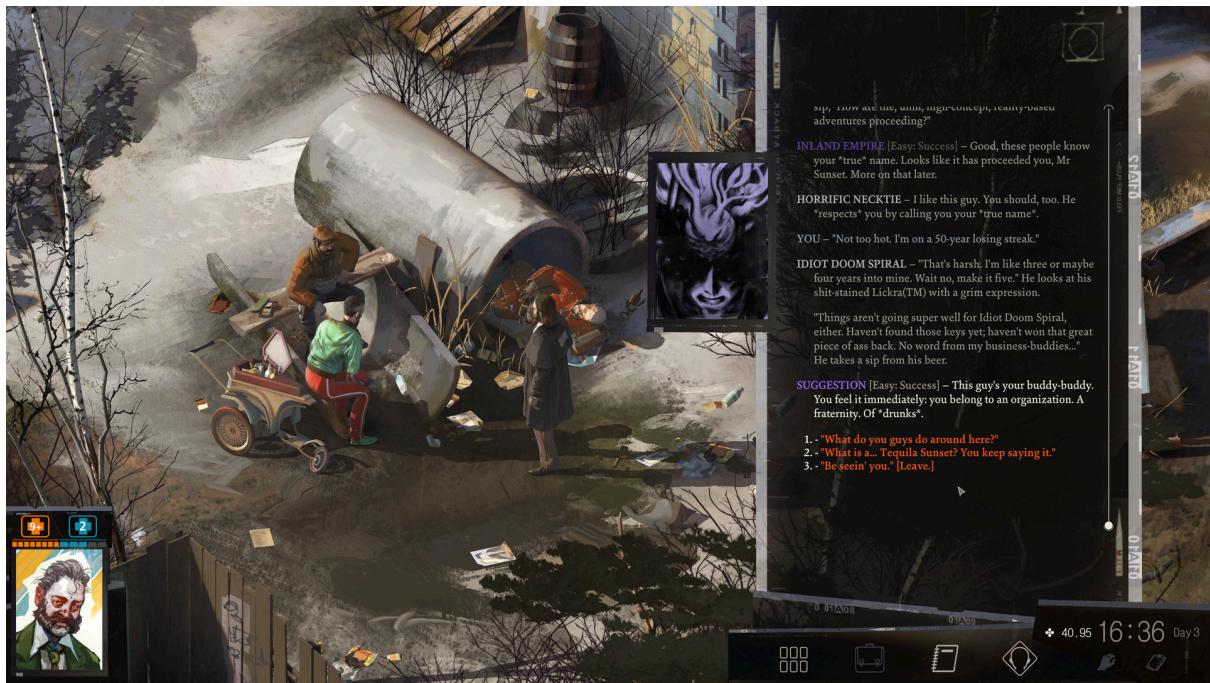
Going back to the narrative, the game also deals with class struggle, as the player will have to get to know the space station in which they found themself stranded after a traumatic event. In the station cyborgs are heavily discriminated against and the player will have to manage their relationships and their resources well not to perish. The game gives the player a limited set of dice each day, which will have to be invested in the chosen action: the higher the dice, the more likely a positive resolution will be.

Citizen Sleeper (Jump Over the Age, 2022) differs from the previously analyzed game in the following ways:

- The player statistics are associated to practical skills and traits, not psychological nuances of the character
- The probabilistic dice rolling is mostly done outside of the game narrative exposition: you roll dice in a management phase, then a mostly scripted narrative is presented to the player, representing the result of the dice and much more.
- Time and space are not real time but turn based, using the dice placement and their number as limiting factors; once you finish all the dice, you won't be able to perform any more meaningful actions (with few exceptions) and your character will move immediately wherever the dice is invested.
- While both have a sidebar for dialogue used to display narrative text, *Disco Elysium* (ZA/UM, 2019) is also voice acted.
- The inventory system is only used for items that can be bought or sold, but not equipped to influence stats of the character - with the exception of health

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regenerating consumables.

These differences, while they may seem minimal, lead to a completely different experience, where the narrative involvement and the ludic involvement have much less interplay between one another in certain aspects of the game.

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Discussion

Ludonarrative-dissonances in Disco Elysium

One first major way that *Disco Elysium* (ZA/UM, 2019) innovates on the genre is, as mentioned, by avoiding a traditional combat system. One would think that by mostly avoiding explicit violent actions the game would work towards, by paraphrasing Bridle, building a "better metaphor", one less rooted in the militaristic roots of the genre. This exclusion of certain player actions would, according to Vella[19], create a reciprocative effect in the avatar-character that would influence the incorporation of the player, that wouldn't feel the pressure experienced in embodying a violent character. However, as critic Matteo Lupetti points out[20], some of strong idiosyncrasies are still present in the game; these idiosyncrasies which are still rooted in the use of computational system, are the cause of ludonarrative-dissonance and, by the definition of the term given in this paper, a disruption of the incorporation state.

The game also manages to use its skill to improve involvement, for example the skill shivers has been described by video essays Jacob Geller as "pure immersion"[21], due to the fact that it interrupts the exploration of the world with detailed and poetic description of the city, greatly contributing to both spacial, narrative and affective involvement.

However other systems, most prominently the thought cabinet and the clothing that the player can equip, generate dissonances. Lupetti notes how, in his article using Bridle's philosophy to analyze *Disco Elysium* (ZA/UM, 2019), the player can find themselves to interrupt dialogue mid-sentence in order to change clothes: this of course is non diegetic behavior made to optimize gameplay. By equipping clothes

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[19] Vella, D. (2013). "It's A-Me/Mario!": Playing as a Ludic Character. Foundations of Digital Games Conference Proceedings, 8, 31-38

[20] Lupetti, M. (2020, June 4). *La Nuova era Oscura Di Disco Elysium: Not: Nero*. Not. Retrieved July 21, 2022, from
https://not.neroeditions.com/la-nuova-oscura-disco-elysium/?fbclid=IwAR3bVLQdQaPaAh2be9R8VEy_eRwFW
LPuYVNGBKNHlN9umFxmFkZNjjLJEFU
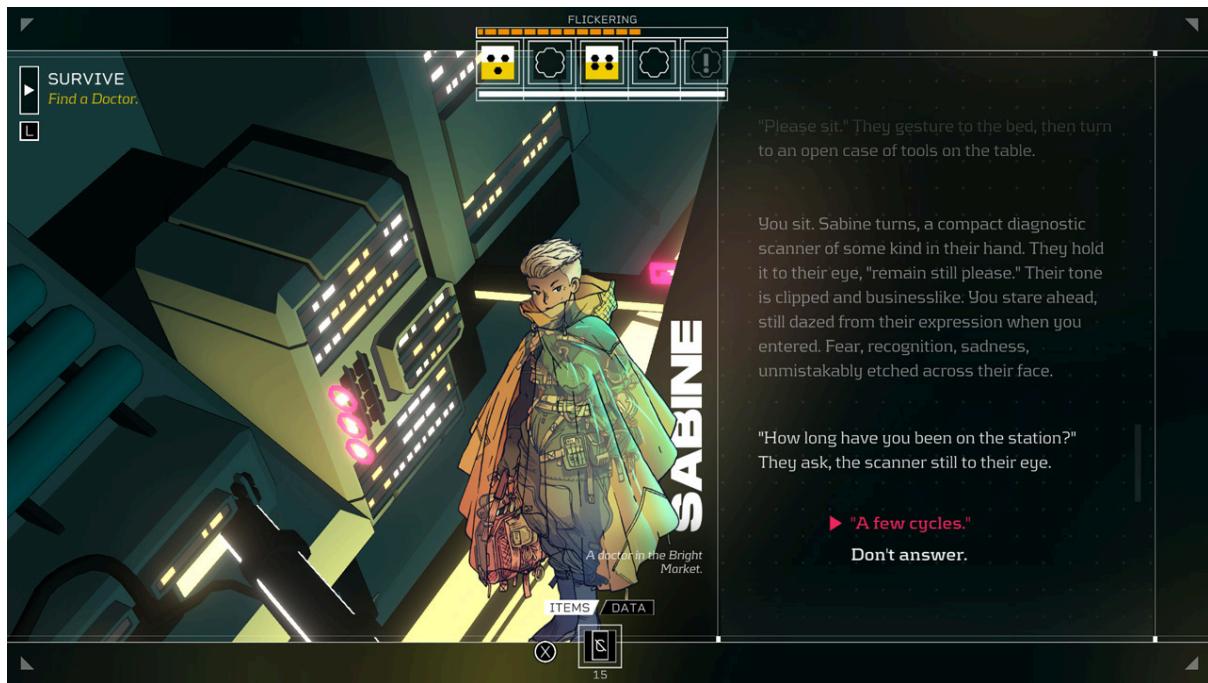
[21] Jacob Geller (2021, January 10). *Searching for Disco Elysium* [Video]. https://youtu.be/Md5PTWBuGpg

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that offer a better modifier for the roll present in the dialogue, the player is maximizing their odds of success. But, as Lupetti says:

"This behavior only makes sense if clothes are only seen as objects that add or subtract points to variables, without any meaning from a narrative point of view."

Using Calleja's involvement we can deduce what is happening: the player, while focused on the narrative and working towards a state of incorporation, is forced to divert attention by a system that leverages on ludic involvement. This system is also actively challenging the diegetic coherence of the story, preventing further narrative involvement in the immediate future. This process also informs the knowledge of the avatar-character, which will lead to internalization of a simplified metaphor of a complex phenomena. All of this concurres in creating a strong disconnection from involvement, identifiable as ludonarrative dissonance.

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Relationships and morality in Citizen Sleeper

As described in the analysis of the game, *Citizen Sleeper* (Jump Over the Age, 2022) keeps narrative involvement and ludic involvement connected but not directly overlapping: you will invest a dice to perform an action, and depending on the result you will present a curated, basically linear narrative. This was part of a deliberate decision by the developer Garreth Damian Martin to limit the space of choice of the player to the systems that are easier to simulate, like economy. In an interview for *Ludonarracon 2022*[22], annual digital convention for narrative games, the developer mentions how they explicitly avoided any simulation of character relationships: Garreth stated how they felt that text is a better medium to convey those types of social interactions.

What the game does is then deliberately avoid the overlapping of ludic involvement and narrative involvement, so that the player can maintain their resources mostly on one at a time, leading to enhanced incorporation. The interchange of information happening through the avatar-character is easily internalized by the player, without cognitive dissonances in the diegesis.

The developer recognised the risks of creating a basic simulation for a complex system, and opted for an alternative solution, breaking the standard for the genre, which often employs relationship meters and morality systems.

The game on the other hand doesn't shy away from using its game systems to create metaphors when opportune and coherent with what the story is trying to communicate.

One example of this happening is the action of working in the Commune present on a later stage of the game. The game has taught the player that, depending on the dice roll, and therefore the performance, they will receive a better or worse pay. In the commune this concept is subverted: the pay is independent of the performance result, giving the message of a more egalitarian space. In this case the metaphor uses systems that, while they still simplify a complex problem, at least communicate a view of the world that is coherent with the intended themes and messages, avoiding a dissonance that would lead to loss of incorporation.

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[22] Fellow Traveller (2022, May 8). *Fireside Chat with Austin Walker & Gareth Damian Martin - LudoNarraCon 2022* [Video]. YouTube.https://www.youtube.com/watch?v=-MhUt9yzFlY

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Summary

In the paper we defined, using Zagal and Deterding work[23], the core components of computer rpg, thus reducing the field of study to only a specific subgenre.

The object of study, immersion, has been declined to involvement and incorporation through Calleja's Involvement Model[24]. The model is then been used, together with the concept of avatar-character[25], to create a working definition of ludonarrative dissonance. As a final piece of supporting literature the philosophies present in bridle's *New Dark Age* (Bridle, 2019) have been analyzed to determine a potential critical dissonance rooted in the overlapping between probabilistic rpg systems and game metaphors.

This body of literature has proved useful to deconstruct and comprehend involvement in *Citizen Sleeper* (Jump Over the Age, 2022) and *Disco Elysium* (ZA/UM, 2019).

In the first case study the developer avoided dissonances by intentionally avoiding the interference of ludic and narrative involvement, while in the second some legacy rpg characteristics hinder incorporation - more precisely the clothing system. There, ludic involvement and narrative involvement find themselves fighting for the player's attention and breaking the diegetic coherence of the text. Furthermore these dissonances are experienced and internalized by the player through the avatar-character, this creates unmet expectations communicated by the context on what is possible or not.

The paper opens the opportunity for further research to build towards a working academic definition of ludonarrative dissonance based on involvement.

To conclude I hope that developers and researchers might understand, through research, the importance and consequences of using a computational system when generating meaning and, therefore, involvement and incorporation in games.

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[24] Calleja, G. (2007). Digital Game Involvement. *Games and Culture*, *2*(3), 236–260.

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