

The Narrative Effects and Value of Memory Discrepancies in Digital Games

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ABSTRACT:

This paper discusses the aesthetic relevance of divergences between player and avatar memories in the context of digital gameplay. Drawing from a Waltonian framework and the notion of the virtual subject, we discern three kinds of memory that are involved in digital gameplay: the avatar's represented memory, the player's actual memory, and the memory about the gameworld the player pretends to have when taking on the avatar's position within the gameworld. Many gameplay situations cause these different kinds of memories to diverge and misalign with one another. When players die and must repeat parts of games, for example, they have memories about the gameworld that are rooted in their previous playthrough, but to which their avatar cannot or should not have access. Several game scholars have noted how such divergences cause narrative conflicts, create inconsistencies within the fictional world, or can even have detrimental effects on players' enjoyment of the game. In this paper, however, we draw from gameplay examples to show how the unique structure of memory in play can also engender unique and valuable narrative experiences. Indeed, we argue that discrepancies between player and avatar memory can be, and often are, used in games as unique narrative devices to create suspense, surprise, or other aesthetically relevant effects.

KEY WORDS:

avatar, dramatic irony, fiction, imagination, memory, narration, paradox of suspense, virtual subject.

K. L. Walton on Epistemic Engagements with Fiction

When describing the complexities of appreciators' responses to representational works of art, K. L. Walton writes that there is a common misconception regarding appreciators' epistemic engagement with narratives: "Critics are often interested in relations between 'what we (the readers) know' and 'what characters know': sometimes we know what characters do not; sometimes they know what we do not; sometimes we share their knowledge and their ignorance. This way of describing the situation is a considerable oversimplification. 'What readers know' is ambiguous [...] between what they 'know' qua participants in their games of make-believe and what they know qua observers of a fictional world [...]"¹

K. L. Walton here emphasizes that the appreciation of representational works involves engaging with them in two ways. First of all, appreciators of representational works are observers. They observe a representational work, such as a painting, novel, play, or film, from their specific perspective in the real world and can gather what the work is supposed to represent based on its perceptual characteristics. Secondly, appreciators are participants in the work. In their interpretation and appreciation, they are caught up in the story, imaginatively enter the world that is represented in the work, and fictionally experience

1 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA: Harvard University Press, 1990, p. 270.

it from within.² K. L. Walton writes that the appreciator's perspective is thus a dual one: "[h]e observes fictional worlds as well as living in them; he discovers what is fictional as well as fictionally learning about and responding to characters and their situations".³ Because the appreciation of a representational work is characterized by such a duality, K. L. Walton argues that there are three kinds of epistemological states⁴ that play a role in responses to this work:

1. the epistemological states of the represented characters;
2. the appreciators' actual, own epistemological states;
3. the epistemological states appreciators fictionally adopt when imaginatively interacting with the fictional world.

The relation between these three different kinds of epistemological states raises questions that are especially interesting to philosophical and narratological analyses of (our engagement with) representational works. As K. L. Walton writes, critics often focus on the differences between (1) and (2). They are interested, for example, in the phenomenon of *dramatic irony*, referring to situations in which the audience of a fiction knows more about the fictional situation than the characters do.⁵ Indeed, many stories hinge on the suspense created by such discrepancies between the audience's knowledge about the fictional events and the characters' false beliefs or fallible memories about those same events.⁶ Take, for example, the nerve-wracking scene in *Romeo and Juliet*, in which Romeo takes his own life because he falsely believes Juliet has died, while the audience, at that point, knows she has not.

Questions relating to the differences between (2) and (3), however, have often been overlooked in criticisms and analyses of stories according to K. L. Walton. These questions have to do with the relation between what fiction appreciators' actually believe about works of fiction, and what they fictionally believe or imagine while engaging with the worlds represented in these works. A viewer of a horror movie can, for example, be so caught up in the movie that they (fictionally) believe the monster depicted within it to be dangerous and terrifying (3), while also being (actually) convinced about the excellent acting qualities of the person portraying this monster (2). This dual stance towards representational works raises a lot of questions. We could ask, for example, to what extent appreciators' actual epistemic states are integrated into their participation in the fiction, to what extent they are left out of it, and what roles these states play in generating the narrative.⁷ "Even if one's actual epistemological states do not influence those one fictionally enjoys",

2 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 273.

3 Ibidem, p. 273-274.

4 Remark by the authors: With 'epistemological states', K. L. Walton denotes what is usually called 'epistemic states'. They are internal or mental states that have to do with knowledge, such as "certainty, verisimilitude, doubt; conviction, conviction and persuasion; and confidence, security and the feeling of familiarity".; RIGO-LEMINI, M.: Epistemic Schemes and Epistemic States. A Study of Mathematics Convincement in Elementary School Classes. In *Educational Studies in Mathematics*, 2013, Vol. 84, No. 1, p. 73.; Remark by the authors: Walton himself mentions knowing, believing, suspecting, conjecturing, as well as suspense and surprise.; WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 263.

5 GOLDIE, P.: Dramatic Irony, Narrative, and the External Perspective. In *Royal Institute of Philosophy Supplements*, 2007, Vol. 60, No. 1, p. 72.

6 See also: RYAN, J. et al.: Toward Characters Who Observe, Tell, Misremember, and Lie. In JHALA, A., STURTEVANT, N. (eds.): *Proceedings of the Eleventh AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*. Santa Cruz : AAAI Press, 2015, p. 56-62.

7 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 270.

K. L. Walton writes, “the counterpoint between the two, the respects in which they do and do not correspond, and how this changes over time, can be significant”.⁸

K. L. Walton distinguishes several problems and paradoxes that are related to discrepancies between (2) and (3).⁹ One of these is the problem of suspense: how can appreciators of a work of fiction still feel suspense when re-experiencing this work?¹⁰ As the feeling of suspense is supposed to be elicited by a sense of mystery and not-knowing, a re-experience of a work can hardly still evoke it in the same way. Why would someone still feel as much suspense when Romeo finds the apparently dead Juliet, for example, if they already know perfectly well that Romeo will think that Juliet is dead and kill himself? K. L. Walton here discerns a significant and possibly problematic divergence between what the appreciator, as someone who is caught up in the story, *fictionally* knows (3), and what they, as someone who reflects on the story from the outside, know *about the fiction* (2) based on previous experiences of it.¹¹

In this paper, we want to take up the challenging questions raised by such divergences, with a focus on memory in digital gameplay. Some of the above-mentioned questions, such as the one about suspense, become especially pressing when looking at the notion of memory within the appreciation of interactive works of fiction such as videogames. We believe there to be two reasons for this. First of all, videogames, unlike non-interactive fictions, *explicitly* mandate their players to be participants in the fiction, and to take on a specific role within the world they present. This role is, moreover, often fleshed out to the point of being a full-fledged and pre-existing fictional figure: the so-called avatar, which has a memory and history of its own. Secondly, due to many videogames being challenges as well as fictional narratives, players can *fail* at them and often have to repeat parts of a game which they remember from playing it the first time. This means that players' actions often cause discrepancies between the memories videogame avatars are represented to have, the memories players actually have, and the memories players adopt during gameplay, while taking on the role of a subject within the gameworld. Therefore, both phenomena like dramatic irony, which are caused by discrepancies between (1) and (2), and problems specific to fiction appreciation and suspense, caused by discrepancies between (2) and (3), seem to be especially relevant research subjects when it comes to the digital game experience.

In the following paragraphs, we investigate these memory divergences in more detail. For this purpose, we will first clarify players' participation in fictional gameworlds and specify the three kinds of memory that are at work in digital gameplay. Secondly, we will describe the complications this structure of memory in gameplay causes, focusing on problems concerning fictional coherency and player enjoyment that are caused by replaying (parts of) games. Some game scholars¹² have identified game mechanics and strategies that can be used to sidestep these problems by avoiding discrepancies between avatar and player memory altogether. In this paper, instead, we argue that an explicit divergence between avatar and player memory can also be valuable, as a narrative device that elicits surprise, suspense, or other aesthetically relevant effects.

8 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 270.

9 Ibidem, p. 255-270.

10 FROME, J., SMUTS, A.: Helpless Spectators: Generating Suspense in Videogames and Film. In *TEXT Technology*, 2004, Vol. 13, No. 1, p. 18-19.

11 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 259.

12 See: IGARZÁBAL, F. A.: *Time and Space in Video Games: A Cognitive-Formalist Approach*. Bielefeld : Verlag, 2019.; CASELLI, S.: Thrown into the World. Transformative Aesthetics of Avatars' In-Game Awakenings. In LATYPOVA, A., OCHERETYANY, K. (eds.): *Proceedings of the 13th International Philosophy of Computer Games Conference (PCG2019)*. Saint Petersburg : Saint Petersburg State University, 2019, p. 1-15.

Participation in Digital Gameworlds

Although the importance K. L. Walton ascribes to participation in representational works such as novels, paintings, and movies is often deemed to be exaggerated,¹³ what he says about the dual role of the appreciator as an observer and a participant seems especially relevant for players of digital games.¹⁴ As S. Gualeni and D. Vella write, players' engagement with games inherently has a double perspectival structure: they simultaneously inhabit a subjective standpoint that is internal to the gameworld and their own subjective standpoint as an individual external to this gameworld.¹⁵

We will use S. Gualeni and D. Vella's term 'virtual subject' to refer to the entity that players inhabit by adopting subjective standpoints internal to gameworlds. This term is rooted in discussions within existential philosophy and phenomenology regarding subjectivity and the self and is closely related to ideas such as M. M. Kania's 'self-avatar'¹⁶ or U. Willhelmsson's 'game ego'.¹⁷ We will use 'virtual subject' to denote "the player's self, merged with the already-given perspective of the avatar she is expected to internalize",¹⁸ i.e., a hybrid subject that differs from both players and avatars. A player's engagement with a gameworld consists in the development of an in-game subjectivity, or rather an 'I-in-the-gameworld', which "the player crystallizes through engaging with the gameworld by means of the playable figure".¹⁹ Such a subjectivity is developed and constrained by both the actual world of the player (as well as their background and actual epistemic states) and the gameworld of the avatar (as well as its rules and fictional characteristics, and the avatar's perspective on it), and gets structured through the player's embodiment in the playable figure.²⁰ The subjectivity taken on in digital gameplay can thus be defined as "a complex amalgam of avatar[s] and player[s]".²¹ This highlights how players, from a phenomenological perspective, are neither entirely external (as mere observers) nor entirely internal (as their avatars are) to the gameworlds they act within.

As such, even though K. L. Walton never discussed digital games in *Mimesis*, his distinction between the appreciator as an observer and the appreciator as a participant is especially relevant in the game experience. The three kinds of epistemic states that Walton deemed important within fiction appreciation are possibly even more obviously

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- 13 CURRIE, G.: *Image and Mind: Film, Philosophy and Cognitive Science*. Cambridge : Cambridge University Press, 1995, p. 179.
 - 14 For more information, see: BATEMAN, C.: *Imaginary Games*. Winchester : John Hunt Publishing, 2011.; TAVINOR, G.: *The Art of Videogames*. Malden : Wiley Blackwell, 2009.; VAN DE MOSSELAER, N.: Fictionally Flipping Tetrominoes? Defining the Fictionality of a Videogame Player's Actions. In *Journal of the Philosophy of Games*, 2018, Vol. 1, No. 1, p. 3. [online]. [2022-02-22]. Available at: <<https://journals.uio.no/JPG/article/view/6035>>.
 - 15 GUALENI, S., VELLA, D.: *Virtual Existentialism. Meaning and Subjectivity in Virtual Worlds*. Basingstoke : Palgrave, 2020, p. 12.
 - 16 For example, see: KANIA, M. M.: *Perspectives of the Avatar: Sketching the Existential Aesthetics of Digital Games*. Wrocław : University of Lower Silesia Press, 2017.
 - 17 For more information, see: WILHELMSSON, U.: Game Ego Presence in Video and Computer Games. In LEINO, O., WIRMAN, H., FERNANDEZ, A. (eds.): *Extending Experiences. Structure, Analysis and Design of Computer Game Player Experience*. Rovaniemi : Lapland University Press, 2008, p. 58-72.
 - 18 KANIA, M. M.: *Perspectives of the Avatar: Sketching the Existential Aesthetics of Digital Games*. Wrocław : University of Lower Silesia Press, 2017, p. 65.
 - 19 VELLA, D.: *The Ludic Subject and the Ludic Self: Investigating the 'I-in-the-Gameworld'*. [Dissertation Thesis]. Copenhagen : IT University of Copenhagen, 2015, p. 22.
 - 20 VELLA, D., GUALENI, S.: Virtual Subjectivity: Existence and Projectuality in Virtual Worlds. In *Techné: Research in Philosophy and Technology*, 2019, Vol. 23, No. 2, p. 119-120. [online]. [2022-02-22]. Available at: <<https://doi.org/10.5840/techné201951499>>.
 - 21 KOEHNE, B., BIETZ, M. J., REDMILES, D.: Identity Design in Virtual Worlds. In DITTRICH, Y. et al. (eds.): *End-User Development: 4th International Symposium, IS-EUD 2013*. Copenhagen : Springer, 2013, p. 65.

discernible within the digital game experience. This experience is shaped by the represented epistemic states fictional game characters (most significantly, the avatar) are represented as having, the actual epistemic states of the player, and the epistemic states of the virtual subject that is formed during play. As we discussed in this section, the latter epistemic states are significantly influenced by the two former categories: what the virtual subject believes, aspires to, and suspects is significantly influenced by what the player actually knows and what the avatar is represented to know. This, however, also means that discrepancies between the avatar's and the actual player's epistemic states are especially problematic, as they could make for a fictionally incoherent, ambiguous, or even self-contradicting virtual subjectivity. In the next sections, we focus on what this might mean for the specific epistemic state of *memory* within digital gameplay.

Three Kinds of Memory in Play

To begin with, we may clarify what we mean by 'memory' and how different kinds of memory could be gathered under the umbrella-category of 'epistemic state' used by K. L. Walton. By focusing on 'epistemic' memory we will direct our attention at individual forms of memory. With this, we would like to put our emphasis on subjective user experience and narrative devices. To do so means to momentarily 'extract' individual memory performances from the continuum of cultural memory only for analytical purposes, and not to deliberately 'exclude' sociocultural influences on individual remembering.²² Such influences will nonetheless be implicitly at the centre of our enquiry, such as for 'memory play' within gaming communities or for the importance of sociocultural frameworks within the formation of individual semantic memory. At the same time, our choice to focus on fictional and narrative aspects and implications of gameworlds limits our field of enquiry to conscious forms of remembering,²³ excluding unintentional and bodily memory

22 Remark by the authors: It is worth noting that the very existence of a 'pre-cultural' individual memory is questioned within memory studies. Individual memory is often referred to as the organic actualization of collective frameworks of memory (cultural memory at the individual and collective level – see: ERLI, A.: *Cultural Memory Studies: An Introduction*. In ERLI, A., NÜNNING, A. (eds.): *Media and Cultural Memory*. New York, NY : Walter de Gruyter, 2008, p. 1-19; ERLI, A.: *Memory in Culture*. Basingstoke : Palgrave Macmillan, 2011.).

23 Remark by the authors: Our present usage of 'memory' entails both episodic and semantic memory. By following E. Tulving (for more information, see: TULVING, E.: *Episodic and Semantic Memory*. In TULVING, E., DONALDSON, W. (eds.): *Organization of Memory*. New York, NY : Academic Press, 1972, p. 381-403.), we may phrase the distinction as between 'remembering' and 'knowing'. The former refers to something that is located in a certain past. Episodic memory entails a sense of time; a connection to the self; and autoegetic consciousness: E. Tulving calls this capacity 'chronesthesia' (TULVING, E.: *Chronesthesia: Conscious Awareness of Subjective Time*. In STUSS, D. T., KNIGHT, R. T. (eds.): *Principles of Frontal Lobe Function*. Oxford : Oxford University Press, 2002, p. 311.), as it consists in a full-fledged mental time travel backwards. Semantic memory, i.e., 'knowing', refers instead to the general world knowledge (concepts, ideas, facts, meanings) that individuals gather during their lives. Semantic memory lies at the basis of how we can apply prior knowledge to novel concepts or state of things (for more information, see: SAUMIER, D., CHERTKOW, H.: *Semantic Memory*. In *Current Science*, 2002, Vol. 2, No. 6, p. 516-522.). By observing 'knowing' as semantic memory and vice versa, we imply that 'to know that X' in a way coincides with 'to remember that X'. Again, this implication is intended for operational purposes only, as it entails a simplification of the matter at hand (both from the perspective of cognitive sciences and epistemology). At the same time, we will exclude from or enquiry the linguistic anomalism or 'remembering' itself – "linguistic evidence indicates that while 'think' and 'know' are indeed universal human concepts, 'remember' is not" (WIERZBICKA, A.: *Is 'Remember' a Universal Human Concept? 'Memory' and Culture*. In AMBERBER, M. (ed.): *The Language of Memory in a Crosslinguistic Perspective*. Philadelphia, PA : John Benjamins Publishing, 2007, p. 38.); "'remembering' is shared by certain languages and unknown to others" (Ibidem, p. 14).

performances, i.e., body memory.²⁴ For the rest of the paper, the modifier 'individual' will remain implicit for brevity.

Based on this understanding of memory, we suggest applying K. L. Walton's distinction between the different epistemic states that are at play in the fiction experience to memory in digital gameplay as follows:

a) *Fictional/represented memory of the avatars*

With this memory kind, we refer to the avatars' memory as represented in the game, i.e., as part of the fictional content of the in-game narrative. Avatars' memory can be implicitly referenced, e.g., when player-characters talk, write, or read about their own memories; it can be explicitly represented, e.g., in flashback cutscenes or dreams; or it can become accessible to players, e.g., when in-game characters visit their own memories, or those of others, as playable levels of the game (see for example *Code Vein*²⁵).

b) *Actual/performed memory of the players*

With this, we refer to what players remember about the gameworld in question as external observers. This memory can be categorized as belonging to the types of knowledge that P. Howell refers to as "extraludic knowledge", gathered outside of the gameworld that is being experienced, "transludic knowledge", gathered across multiple and separated, other gameworlds, and "intraludic knowledge", gathered from within the specific gameworld that is being experienced.²⁶ In the context of this paper, we could talk about extraludic, transludic, and intraludic memories. These kinds of memory are performed by actual players, who draw from the things they remember about the gameworld as an artefact to build expectations towards and beliefs about this world. These actual memories are themselves situated outside of the fictional gameworld in question. Players remember what has occurred in the gameworld and what their own avatar has done, regardless of these events having fictionally occurred in a different playthrough, having been witnessed in the game's trailer, or having been reset because the avatar died and respawned afterwards. As external observers, players might remember where the useful items are hidden, in which locations the game is prone to crashing, and in which spots they can securely save their progress. They can make predictions about the game's fictional or mechanical content based upon their own, actual history with the game.

c) *Virtual/imaginative memory of the virtual subjects*

With this, we refer to what players imaginatively remember as involved participants within the gameworld. This kind of memory only becomes relevant when players take on a role in the fictional gameworld. If (A) is a memory that gets depicted as part of the fictional content of a virtual world and (B) is an actual memory that gets performed by human beings, then this third category refers to the memory players imaginatively perform when taking on a virtual subjectivity within a gameworld. This memory category is somewhat problematic from an epistemological perspective, as it belongs to the virtual subject, which is amid the two domains of the fictional world and the actual world. The memories that guide the virtual subject's behaviour within a gameworld depend at the same time on the fictional memories the avatar is represented to have, and on the actual memories

24 For more information, see: FUCHS, T.: *Body Memory and the Unconscious*. In LOHMAR, D., BRUDZINSKA, J. (eds.): *Founding Psychoanalysis Phenomenologically*. Dordrecht : Springer, 2012, p. 69-82.

25 BANDAI NAMCO: *Code Vein*. [digital game]. Tokyo : Bandai Namco Entertainment, 2019.

26 HOWELL, P.: *A Theoretical Framework of Ludic Knowledge: A Case Study in Disruption and Cognitive Engagement*. Paper presented at the 10th International Philosophy of Computer Games Conference. Malta, presented on 2nd November 2016.

the player has (concerning both the gameworld in question and their surrounding, actual world). The memory of the virtual subject thus only emerges from the agency the player enacts through their proxy within the gameworld. When players take on a fictional role, they tend to behave as if they actually remember something of which they, in reality, know that it only *fictionally* took place. We can talk of the player having a 'memory-like imagining': the player imaginatively remembers certain states of affairs, based on their projecting into the situation of someone within the fictional world, and interacting with this world from the internal perspective of the virtual subject. In videogames, this kind of 'projection' is often very specifically guided by the representation of an avatar, as the figure the player is *mandated* to imaginatively identify with. In this paper, we argue that, by imaginatively projecting into the situation of the avatar who remembers R, the player is mandated to have the memory-like imagining that R.²⁷

This latter kind of memory is thus centred within the virtual subject: players (who have memories about the fictional world) take on the role of avatars (who have their represented memory) and construct virtual subjects based on their engagement with the game, integrating both their own and their avatar's memory about the gameworld. As S. Caselli writes: "players play with the memory of a new, hybrid, virtual subject rather than with the memory of their own avatars" and "these virtual subjects simply deviate both from avatars and from players".²⁸ This leaves us with interesting problems to investigate: namely, the narrative and experiential problems that are caused when the played memory of the virtual subject is constructed based on diverging or even contradicting memories about the gameworld held by the avatar and the actual player. Throughout the rest of this paper, we will focus on how the divergence of (A) and (B) can prompt the construction of an unstable or inconsistent (C).

Memory Discrepancies, Fictional Incoherence, and the Problem of Suspense

S. Poole claims that "there can be no dramatic irony in videogames, because dramatic irony depends on a knowledge differential between spectator and protagonist – yet in a videogame the player is both spectator and protagonist at once".²⁹ This claim ignores the inherent duality of the player's virtual subject position as being influenced both by the avatar's represented memory and the actual memory of the player themselves. Indeed, instead of claiming that there can be no knowledge differential because the player takes on a virtual subject position of being at once spectator and protagonist, we want to reverse the argument here. We want to discuss how the virtual subject itself is often a complicated, schizophrenic figure, because of the differences in memory between the two perspectives integrated within it.

27 Remark by the authors: We can here draw a parallel with how G. Currie and I. Ravenscroft define "imaginative beliefs" and "imaginative desires". According to them, "I imaginatively project into the situation of one who believes P and desires Q when I have the belief-like imagining that P and the desire-like imagining that Q". CURRIE, G., RAVENSCROFT, I.: *Recreative Minds: Imagination in Philosophy and Psychology*. Oxford : Oxford University Press, 2002, p. 22.

28 CASELLI, S.: Thrown into the World. Transformative Aesthetics of Avatars' In-Game Awakenings. In LATYPOVA, A., OCHERETYANY, K. (eds.): *Proceedings of the 13th International Philosophy of Computer Games Conference (PCG2019)*. Saint Petersburg : Saint Petersburg State University, 2019, p. 9.

29 POOLE, S.: *Trigger Happy: Videogames and the Entertainment Revolution*. New York, NY : Arcade Publishing, 2004, p. 81.

A. Suduiko describes a specific kind of fictional incoherence that is caused by this schizophrenia of the virtual subject. He describes a game situation in which a player meets a dangerous in-game monster that was lurking behind a corner and dies when fighting it. Afterwards, this player carefully avoids said corner. This raises the question of why the avatar, fictionally, acted the way he did. As A. Suduiko writes, “in any given videogame narrative, many of the avatar’s actions are inexplicable if we appeal only to the avatar’s beliefs, desires, and knowledge”.³⁰ The actions undertaken in this example can only be explained by referring to the memories the actual player has, but those memories are not at all supposed to be part of the fiction. One could say this problem is caused by the fact that games consist, at the same time, of a set of rules and a fictional world,³¹ which both ask for a different kind of engagement. Gameplay-wise, the relevant memory is the player’s (B), and changing tactics against the monster seems to be the obvious choice if one wants to win. Fiction-wise, on the other hand, the relevant memory is the avatar’s (A), and as the avatar has no memory of the monster, they have no fictional reason to change tactics. This inconsistency in the fictional game narrative also raises an interesting normative problem for the player: what are they *supposed* to imagine in this situation? Should not the players roleplay their avatars, and pretend not to know about the monster, feigning ignorance, and so engage in the make-believe game that the videogame mandates?³² Or is, conversely, such an imaginative identification of the player with the avatar made impossible because of the difference in relevant memories both have?

In any case, S. Poole was wrong when he claimed that there can be no knowledge differential between the player-as-a-spectator and the player-as-a-protagonist. Yet, we acknowledge that the existence of such a differential in digital gameplay is not sufficient for dramatic irony to occur. As H. Wood points out, dramatic irony only works when the spectator knows more than the protagonist ‘and can do nothing about what will happen’.³³ As shown in the above example, a knowledge differential between avatar and player in games instead often leads to the player changing the fate of the avatar based on their remembering the avatar’s previous demise. Moreover, making the player powerless to intervene in the avatar’s fate even though they remember what will happen will likely not create the suspense that is characteristic of dramatic irony, but rather be “dramatically dissatisfying” for the player.³⁴ The kind of knowledge differential that arises when players remember things about a gameworld of which their avatars have no memory thus fails to elicit suspense in the way that the narrative device of dramatic irony is supposed to do. Even worse, it gives rise to the problem of suspense mentioned earlier in this paper. The growing knowledge the player, but not the avatar, has about the gameworld often actively stands in the way of any prolonged suspenseful experience.

Unsurprisingly, game designers are also aware of this suspense problem. In an interview about *Outer Wilds*³⁵, for example, the designers of this game can be heard saying that they want to make a specific horror section in the game more suspenseful by making it easier.³⁶ The designers realized that players were failing this section too often,

30 SUDUIKO, A. G.: The Role of the Player in Video-Game Fictions. In *Journal of the Philosophy of Games*, 2018, Vol. 1, No. 1, p. 6.

31 For more information, see: JUUL, J.: *Half-Real: Videogames Between Real Rules and Fictional Worlds*. Cambridge, MA : MIT Press, 2005.

32 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 261.

33 WOOD, H.: Dynamic Syuzhets: Writing and Design Methods for Playable Stories. In NUNES, N., OAKLEY, I., NISI, V. (eds.): *Interactive Storytelling: 10th International Conference on Interactive Digital Storytelling*. Madeira : Springer International Publishing, 2017, p. 34.

34 Ibidem.

35 MOBIUS DIGITAL: *Outer Wilds*. [digital game]. West Hollywood, CA : Annapurna Interactive, 2019.

36 *Outer Wilds Developers Break Down Echoes of the Eye | Noclip Podcast #49*. Released on 19th November 2021. [online]. [2022-05-14]. Available at: <<https://www.youtube.com/watch?v=tz8Sw6X-knM>>.

thus having to repeat it multiple times and losing every feeling of horror and suspense because they started effortlessly remembering the enemy positions and the locations where jump scares occurred. Making the horrific monsters easier to avoid would thus, somewhat counter-intuitively, be likely to make encounters with these enemies more suspenseful, simply because players would be in a position that is more similar to that which their avatar is fictionally represented to be in: not remembering the movements of the monsters, and being shocked by every encounter.

In conclusion, rather than an application of the narrative device of dramatic irony, the knowledge advantage of the player over the avatar seems to be an undesirable and unintentional, but almost unavoidable, by-product of interactive, digital gameplay. As discussed, a discrepancy between what the player remembers as an observer, and what they (are supposed to) fictionally remember as a participator/protagonist can be detrimental not only to the consistency of fictional game narratives, but also to the player's identification with the avatar, and the suspense they are supposed to feel when playing. It should thus be no surprise that game designers and game scholars alike have reflected on ways to avoid these memory discrepancies and their effects.

Ways to Avoid Memory Discrepancies

One way to solve the problems described above would be to quite literally erase any trace of fictional or represented in-game memories. In his paper *Thrown into the world: Transformative aesthetics of avatars' in-game awakenings*, S. Caselli describes how many narrative, single player digital games make use of the trope of the amnesiac hero to facilitate users' engagement with game worlds: "The introduction of amnesiac avatars facilitates the first liminal phase of engagement with the virtual world and narratives: eliminating the memory of the playable figure, game narratives provide the player with an 'extended facticity' (in Sartrean terms) that is much [easier] to familiarize with, at least lightened by the whole significant baggage of experiences of the main character".³⁷

S. Caselli describes how many games represent amnesiac avatars that have just as much (namely none) previous knowledge about the gameworld as the player does. Because of their memory loss, he writes, "all of these avatars expressly come into the world as innocent and unprepared as the players do – they both experience the same 'thrownness', feeling 'abandoned' in the world".³⁸ This set-up not only facilitates the player's identification with the avatar, but also narratively embeds the learning process the player has to go through when starting to engage with this game as a learning process the amnesiac hero also has to go through. In his chapter on the hallmark 'Groundhog Day Effect' in digital games, F. A. Igarzábal describes another five strategies to assure that avatar and player memory are fictionally similar or at least narratively compatible with one another.³⁹ First of all, F. A. Igarzábal mentions how the activity of 'respawning' can be integrated in the game's fiction so that it does not cause a discrepancy between player and avatar

37 CASELLI, S.: *Thrown into the World. Transformative Aesthetics of Avatars' In-Game Awakenings*. In LATYPOVA, A., OCHERETANY, K. (eds.): *Proceedings of the 13th International Philosophy of Computer Games Conference (PCG2019)*. Saint Petersburg : Saint Petersburg State University, 2019, p. 8.

38 Ibidem, p. 12.

39 IGARZÁBAL, F. A.: *Time and Space in Video Games: A Cognitive-Formalist Approach*. Bielefeld : Verlag, 2019, p. 115-138.

memory. In *BioShock*⁴⁰, for example, the player-character is reconstructed by a so-called 'Vita Machine' upon death. Similarly, *Outer Wilds* features a machine that restores the player-character's memories every time they die and come back to life. This means the player-character fictionally retains their memories from before they died, just like the player does. Secondly, and similarly, death itself can become an official part of a game's fiction, so that it no longer causes a discrepancy in the player's and the avatar's memories about the gameworld. In *Shadow of Mordor*⁴¹, for example, the player-character Talion is immortal within the game's fictional story. Thus, when his health-bar depletes, the gameworld does not reset to an earlier state, but Talion instead merely passes out and is revived again. The revived Talion, as well as his in-game enemies, and the actual player, afterwards remember that Talion temporarily lost consciousness or apparently 'died'. Thirdly, F. A. Igarzábal discusses games like *Life is Strange*⁴² and *Braid*⁴³, which allow players to rewind time after failures, thus avoiding the game-over state and the narrative contradictions that come with it. Whenever this feature is used, both the avatar and the player re-experience certain events within the gameworld while remembering what will or might happen based on previous, now-rewound experiences. Fourthly, games can negate the memory or knowledge gap between player and avatar by offering strategies to gather information that are available to both the player and the avatar. *Batman: Arkham Asylum*⁴⁴, for example, features the so-called 'Detective Mode', which allows Batman (and the player) to look through walls and observe enemy positions. This makes it unproblematic if the player knows the exact locations of enemies when replaying certain levels, as this information is easily available to Batman as well. And lastly, F. A. Igarzábal points out that some games make it hard or impossible to replay (parts of) the game, for example through a permadeath mechanic. He especially refers to games that combine a permadeath mechanic with procedural level generation such as *The Binding Of Isaac: Rebirth*⁴⁵. When dying in such games, one does not return to an earlier state of the gameworld, but rather has to start in a newly generated world, the lay-out and enemy placements of which can neither be remembered by the player, nor the player-character.⁴⁶

S. Caselli and F. A. Igarzábal both describe how game designers can address and mitigate the memory discrepancies that cause narrative contradictions or unsuspenseful gameplay. Both of them describe game mechanics or strategies that make sure players and their avatars have more or less equal knowledge or memories about the gameworld, thus making the construed memory of the virtual subject less problematic. Yet, even with these strategies, memory discrepancies are bound to happen. Not only can players replay entire games, but they can also gather information about games based on having played a previous game in the same series, by hearing about other players' experiences of a game, by reading guides, or by watching trailers and Let's Plays. In those cases, players often know or remember more about the gameworld than their avatar does.

40 2K BOSTON: *BioShock*. [digital game]. Novato, CA : 2K Games, 2007.

41 MONOLITH PRODUCTIONS: *Middle-Earth: Shadow of Mordor*. [digital game]. Burbank, CA : Warner Bros. Interactive Entertainment, 2014.

42 DONTNOD ENTERTAINMENT: *Life is Strange*. [digital game]. Tokyo : Square Enix, 2015.

43 BLOW, J.: *Braid*. [digital game]. Austin, TX : Number None, 2008.

44 ROCKSTEADY STUDIOS: *Batman: Arkham Asylum*. [digital game]. Burbank, CA : Warner Bros. Interactive Entertainment, Eidos Interactive, 2009.

45 NICALIS: *The Binding of Isaac: Rebirth*. [digital game]. Santa Ana, CA : Nicalis, 2017.

46 Remark by the authors: Interestingly, as S. Gualeni and D. Vella write, "a 'permadeath condition' does not necessarily need to be mechanically enforced by the game's affordances, but can also be a quality of the game experience that is self-imposed by players". This means that players themselves can actively avoid potential narrative contradictions caused by their avatar's death in certain games by implementing the permadeath condition themselves.; GUALENI, S., VELLA, D.: *Virtual Existentialism. Meaning and Subjectivity in Virtual Worlds*. Basingstoke : Palgrave, 2020, p. 20.

We have discussed how such discrepancies can cause problems for the digital game experience. In the next paragraph, however, we will describe how divergences between player and avatar memory can also be used as narrative devices to make games more interesting or suspenseful. Instead of treating such discrepancies as problematic and describing how they can be avoided by game designers, we will describe games that acknowledge and use these differences to create unique effects within the game experience.

Conflicting Memories as Narrative Devices

As K. L. Walton says, a fiction experience can be significantly influenced by the ways in which the epistemic states of the appreciator-as-an-observer do or do not correspond with those of the appreciator-as-a-participant.⁴⁷ Regarding the experience of digital games, a very similar kind of influence can be recognized in situations where the memories of the actual player diverge from those of the represented avatar. In the next sections, we will discuss three ways in which the digital game experience can be made more interesting by the deliberate creation or acknowledgement of such memory discrepancies. More specifically, we will discuss games that use these memory discrepancies as narrative devices that, similarly to the device of dramatic irony, are supposed to elicit aesthetically valuable, often emotional, responses in players.

Meta-Fictionally Acknowledging Fictionally Inconsistent Memories

First of all, some games acknowledge the memory gap between the player and the avatar in a metafictional way, with the intent of provoking desirable emotional responses in players. These games give up on trying to make their fictional world a coherent and consistent one altogether, instead explicitly emphasizing or capitalizing on the fictional inconsistencies caused by the player's extra-fictional memories about this gameworld as a digital artefact.

*The Stanley Parable*⁴⁸ is an example of a game that turns the memory-related problems mentioned before into opportunities for comedy. At one point in this game, the player has to input a code to open a secret passageway. The player can find the right password by waiting for the game's Narrator to mention it. However, when players on subsequent playthroughs type in the correct password without waiting for the Narrator to reveal it, likely when hunting for the game's speedrun achievement, the Narrator becomes cross with them. Remarking that Stanley seems to be in too much of a rush to hear him out, the Narrator makes the player lose precious time (and probably the chance to win the speedrun) by forcing them to listen to some new age music before they can continue through

47 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 270.

48 GALACTIC CAFE: *The Stanley Parable*. [digital game]. Austin, TX : Galactic Cafe, 2011.

the secret passageway. In this case, instead of trying to avoid a contradiction between the player-as-an-observer and the player-as-a-participant in the fiction, the game acknowledges the absurdity of the fictionally inconsistent game situation, comically punishing the speedrunning player for making use of a memory they should not fictionally have.⁴⁹

Besides humorous effects, the acknowledgement or introduction of extra-fictional memories in gameworlds also often elicits a sense of the digital sublime. We borrow the term from T. Betts, who links it to “games that appear boundless and autonomous”.⁵⁰ These games thus often elude the player’s control and represent fictional worlds the boundaries of which cannot be clearly discerned. This idea of the digital sublime is relevant to the present paper as gameworlds can feature extra-fictional elements, especially extra-fictional memories, to give the idea that their fictional boundaries are widely extended beyond what players expect.⁵¹ Games such as *Undertale*⁵² feature dialogues in which non-playable characters show that they remember what the player has been doing during previous runs of the game, even if the player thought that data to be deleted or overwritten. While this game does invite you to reset the fictional world and replay the story, it at the same time questions the very possibility of having a different subsequent playthrough, as some characters will keep reminding you of what you have done in previous ones. Such a paradoxical clash between the apparently extra-fictional memories characters have and the fictional memories they are supposed to have is usually well received and widely discussed by communities of players. Indeed, this phenomenon can be seen as a kind of metalepsis in digital games that heightens the player’s emotional involvement in the fictional world.⁵³ We find another renowned example of such a process in *Metal Gear Solid*⁵⁴, in which characters such as Psycho Mantis astonish and overtake players by referring to their actual, non-fictional memories about other games (made possible by the game reading what other games have been saved on the currently inserted memory card).

Eliciting the digital sublime can also lead to another fruitful effect of the clash between different kinds of memory in gameworlds, i.e., the experience of horror. Many plot twists in recent horror games such as *Doki Doki Literature Club!*⁵⁵ or *Inscryption*⁵⁶ capitalize on the player’s and the game console’s actual memories to scare players and make them feel less comfortable.⁵⁷ In *Doki Doki*, in-game character Monika takes control of the game by manipulating, moving, and erasing its saved data (the digital, actual memory of the software), thus embodying the most frightening and effective horror aspect of the game. *Inscryption*, similar to *Undertale*, threatens instead to erase data that players have saved on their computers (both previous saved states of the game and other installed software that is unrelated to the game), leveraging the vulnerability of erasable digital memories.

49 For a more in-depth discussion of how the duality of players during gameplay can be used for comic purposes, see: VAN DE MOSSELAER, N.: Comedy and the Dual Position of the Player. In BONELLO RUTTER GIAPPONE, K., MAJKOWSKI, T. Z., ŠVELCH, J. (eds.): *Video Games and Comedy*. Cham : Palgrave, 2022, p. 35-52.

50 BETTS, T.: *An Investigation of the Digital Sublime in Video Game Production*. [Dissertation Thesis]. Huddersfield : University of Huddersfield, 2014, p. 2.

51 For more information, see: SHINKLE, E.: Videogames and the Digital Sublime. In KARATZOGIANNI A., KUNTSMAN A. (eds.): *Digital Cultures and the Politics of Emotion*. London : Palgrave Macmillan, 2012, p. 94-108.

52 FOX, T.: *Undertale*. [digital game]. Manchester, New Hampshire : T. Fox, 2015.

53 WASZKIEWICZ, A.: ‘Together They Are Twofold’: Player-Avatar Relationship Beyond the Fourth Wall. In *Journal of Games Criticism*, 2020, Vol. 4, No. 1, p. 15. [online]. [2022-02-22]. Available at: <<http://gamecriticism.org/s/Waszkiwicz-4-1.pdf>>.

54 KONAMI COMPUTER ENTERTAINMENT JAPAN: *Metal Gear Solid*. [digital game]. Tokyo : Konami, 1998.

55 TEAM SALVATO: *Doki Doki Literature Club!*. [digital game]. New Jersey : Team Salvato, 2017.

56 DANIEL MULLINS GAMES: *Inscryption*. [digital game]. Austin, TX : Devolver Digital, 2021.

57 VAN DE MOSSELAER, N.: Only a Game? Player Misery Across Game Boundaries. In *Journal of the Philosophy of Sport*, 2019, Vol. 46, No. 2, p. 204.

Subverting the Player's Memory Advantage

Secondly, the memories the player (but not the avatar) has can be explicitly subverted by changing the game's events upon replaying them, thus re-creating suspense and surprise because players' expectations are explicitly broken. This effect can be achieved by designing player choices in a peculiarly adaptive way, by making subsequent playthroughs unpredictable, or through so-called "memory play". An example of adaptive choice design can be found in *inFAMOUS*⁵⁸. At one point in this game, the player is given the option to either save six doctors or to save Trish, the player-character's girlfriend. When the player chooses to save Trish, however, the main antagonist reveals that Trish was actually disguised as one of the six doctors who the player left to die. Yet, if the player redoes this level out of regret and saves the doctors instead, they find out that, this time around, Trish was not disguised as one of the doctors and thus still died. In this case, the player's memory about the antagonist's trap was rendered useless, causing a peculiar kind of interactive, dramatic irony: knowing perfectly well what will happen to Trish, the player is powerless to save her, as her fate is sealed regardless of the choice made by the oblivious player-character.

A similar strategy of adjusting gameplay can be applied on a larger scale: not just pertaining to the replaying of particular scenes or levels, but to a repeating of entire games. *Nier: Automata*⁵⁹, for example, is a game that is designed to be played multiple times. Differently from other games that favour subsequent playthroughs, however, the plot and world of *Nier: Automata* significantly change from one playthrough to another. In this sense, by replaying the game and expecting certain events to follow a specific order (making use of what Howell calls intraludic knowledge), users find themselves dealing with something entirely different from the previous iterations. Even major narrative events change over multiple playthroughs, and players can engage with new challenges, enemies, and aspects of the plot. While avatars are unaware of this, players notice (extra-fictionally) that the game is subverting previous narratives. Thus, although memory discrepancies between player and avatar are not as such avoided, these discrepancies at least become interesting to players, who are invited to reflect, in each different iteration of the story, on the different memories they and their avatars have. The outcome is a deliberately schizophrenic virtual subject, which metafictionally exists on the boundary of the actual and the fictional world, with interesting emotional and/or narrative effects as a result.

Some games achieve a similar effect by taking advantage of players' transludic memories through so-called "memory play". With this term, S. Arnold-de Simone points out "a wide range of open-ended iterations of playful and creative meaning-making"⁶⁰ that is usually favoured by texts that invite their appreciators "to respond in an ongoing open game of creative reading"⁶¹ based on previous texts from a same series, or franchise. This can be found in *Final Fantasy VII Remake*⁶². Despite expecting it to be a straight port of the original PSX game, fans found out that the plot of the game derailed from the original, taking an entirely different route. In the remake, the designers even added a new type of enemy that appears whenever the game events stray from the original storyline: the Whispers.

58 SUCKERPUNCHPRODUCTIONS: *inFAMOUS*. [digital game]. San Mateo, CA : Sony Computer Entertainment, 2009.

59 PLATINUMGAMES: *Nier: Automata*. [digital game]. Tokyo : Square Enix, 2017.

60 ARNOLD-DE SIMINE, S.: Beyond Trauma? Memories of Joi/y and Memory Play in *Blade Runner 2049*. In *Memory Studies*, 2019, Vol. 12, No. 1, p. 64.

61 Ibidem, p. 69.

62 SQUARE ENIX: *Final Fantasy VII Remake*. [digital game]. Tokyo : Square Enix, 2020.

Players' surprise about these changes was further reinforced by some specific in-game characters appearing to know the events that occurred in the original game and metafictionally commenting that they would like to repeat the plot exactly as it was. In this sense, Final Fantasy VII Remake combines strategies for making the players' fictionally inconsistent memories interesting: by straying from what the player expects based on their extra-fictional memories, and by metafictionally commenting on these extra-fictional memories.

In both this and the previous examples, the player's memory advantage over their avatars is undone, as forms of extra-fictional "memory play" that built upon previous playthroughs or previous games mislead users, subverting their expectations and leading to new fictional horizons. This can happen quite literally: at the end of Final Fantasy VII Remake, for example, the main characters defeat the Whispers and step into a brand new gameworld.

Reversing the Memory Advantage

Usually, memory-related problems in digital games have to do with players having memories they, as participants in the fiction, should not have. However, the memory advantage players usually have over their avatars can also be reversed by giving the avatar memories the player only finds out about through playing the game. In the games discussed in this section, the in-game avatars have fictional memories the player does not have, thus rendering the player's virtual subject-role fictionally incomplete and making the overarching game narrative one that advances through a step-by-step discovery of the fictional memories of the avatar.

Digital games that feature stories of revenge, such as *God of War*⁶³ or *Disgaea 5: Alliance of Vengeance*⁶⁴, often revolve around such a gradual discovery of the main characters' pasts. In both games, players do not know what motivates their player-characters pursuit of revenge until advancing through the story far enough. The characters' quest for vengeance thus unfolds in parallel with the players' quest to learn about the reasons that prompted it: this may lead to significant narrative climaxes, in which the culmination of current events can finally be related to events in the characters' memories (often experienced through playable flashbacks).

This strategy of letting the player discover fictional memories is especially effective in combination with game narratives that start *in medias res*. At the start of *Persona 5*⁶⁵, for example, players neither know why the main character is being interrogated as a criminal nor why he has been expelled from his former school. In fact, the entire game is a long playable flashback that is supposed to gradually reduce the memory discrepancy between the protagonist and the player. However, the more cryptic and convoluted the plot becomes, the more astonishing and baffling these memory discrepancies feel, and thus the more captivating the game narrative is in terms of suspense and engagement. By similarly omitting the memories and the past of the main character, *Hollow Knight*⁶⁶ revolves around the ambiguity of the protagonist's will and choices, emphasized by the impossibility for players to access its memories and its thoughts. The playable introduction

63 SANTA MONICA STUDIO: *God of War*. [digital game]. San Mateo, CA : Sony Computer Entertainment, 2005.

64 NIPPON ICHI SOFTWARE: *Disgaea 5: Alliance of Vengeance*. [digital game]. Kakamigahara : Nippon Ichi Software, 2015.

65 P-STUDIO: *Persona 5*. [digital game]. Tokyo : Atlus, 2016.

66 TEAM CHERRY: *Hollow Knight*. [digital game]. Adelaide : Team Cherry, 2017.

of *Pathologic 2*⁶⁷ also puts players in the shoes of an avatar that seems to know much more than they do. In this game, players have to choose dialogue options without even knowing the events on which the claims of their avatars are based. Note that in games like this, fictional inconsistencies thus abound and players often have a hard time identifying with the mysterious avatar and constructing a coherent virtual subjectivity. Instead of being problematic, however, these phenomena are here used in a narratively interesting way, bringing back suspense through the avatar's memory advantage, and turning the player's game experience into a quest for closing the memory gap.

Conclusion

In this paper, we distinguished between three kinds of memory that are at work within digital gameplay: the represented memory of the avatar, the actual memory of the player, and the imaginative memory of the virtual subject. We focused on ways in which these divergences can be used to make the game experience more interesting or exciting. By meta-fictionally acknowledging memory discrepancies, making the player's memory advantage useless, or giving this advantage to the player-character instead, the schizophrenia or incoherence of virtual subjects, which is often an unintentional by-product of gameplay, can be turned into a deliberate narrative device. We discussed how this device can be used to elicit fun, horror, or an experience of the sublime, to favour memory play and community interaction, or to estrange players from the character they supposedly inhabit and invite them to piece together this character's memories.

Undoubtedly, much more can be said about the importance of memory discrepancies to the game experience. Indeed, as Walton already hinted, when it comes to the experiential and narrative effects of the memories the player has as an observer and a participant, "the variety of possibilities and their subtlety and complexity are boggling".⁶⁸ This initial exploration of the subject thus leaves many possibilities for further research, including in-depth comparisons between the role of memories in experiences of interactive and non-interactive works of fiction, investigations of how memories are prescribed to players through the figure of the implied player,⁶⁹ and examinations of cases where the boundaries between fictional and actual memory are blurred to the point of being indistinguishable.

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67 ICE-PICK LODGE: *Pathologic 2*. [digital game]. Bellevue, WA : tinyBuild, 2019.

68 WALTON, K. L.: *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA : Harvard University Press, 1990, p. 271.

69 See also: AARSETH, E.: I Fought the Law: Transgressive Play and the Implied Player. In AKIRA, B. (ed.): *Proceedings of the 2007 DiGRA International Conference: Situated Play*. Tokyo : DiGRA, 2007, p. 130-133.

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