VIRTUAL CERTAINTY IN VIDEO GAMES: ITS INFLUENCE ON THE IMMERSIVE EXPERIENCE AND THE DEVELOPMENT OF NARRATIVES

LA CERTEZA VIRTUAL EN LOS VIDEOJUEGOS: SU INFLUENCIA EN LA EXPERIENCIA INMERSIVA Y EL DESARROLLO DE NARRATIVAS

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Abstract: Drawing inspiration from Wittgenstein's notion of "certainty," I argue that in many video games one can distinguish between everyday certainties and certainties characteristic of each video game. To refer to this kind of certainties, in this paper I introduce the notion of "virtual certainty" and present its distinguishing features. Then I explain why the fact of sharing virtual certainties constitutes a re-ontologization or immersion in a world-picture – i.e. a set of certainties – that is significantly different from the everyday world-picture, so that the latter may remain in the background while the player is immersed in the world-picture of the game. Lastly, I clarify why this immersion in a virtual world-picture is really achieved when the individual is able to develop narratives based on virtual certainties in order to address video game challenges.

Keywords: Certainty, Virtual reality; Video games; Narratives; Wittgenstein.

Resumen: Inspirándome en la noción wittgensteiniana de "certeza", mantengo que en muchos videojuegos cabe distinguir entre certezas cotidianas y certezas características de cada videojuego. Para referirme a este tipo de certezas, en el presente artículo introduzco la noción de "certeza virtual" y expongo sus características básicas. Posteriormente

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explico por qué el hecho de compartir certezas virtuales constituye una reontologización o inmersión en una imagen del mundo – léase un conjunto de certezas – significativamente distinta de la imagen del mundo cotidiana, por lo que ésta puede mantenerse en un segundo plano mientras se está inmerso en aquélla. Por último, aclaro por qué esta inmersión en una imagen del mundo virtual se acaba de conseguir cuando el sujeto es capaz de desarrollar narrativas basadas en certezas virtuales para afrontar retos impuestos por el videojuego.

Palabras clave: Certeza, Realidad virtual, Videojuegos, Narrativas, Wittgenstein.

1. Introduction

One evening in 1972, a bar in Sunnyvale, California, made available to customers a machine that enabled them to play a video version of ping-pong – called *Pong* – in which two players moved up and down a pair of paddles that bounced a blip back and forth as if it were a ball. Although the machine quickly broke down after being stuffed with a lot of quarters, the story of *Pong* did not end there: for shortly afterwards it entered the homes of millions of families worldwide that gathered around the television set to enjoy its home version. Since then, the rise of video games has been unstoppable. Today nearly half of the world's population plays them on tablets and phones either offline or online, either alone or with friends and unknown people from all over the world (WePC, 2019). Furthermore, the video games market is expected to grow extraordinarily: from $131 billion in 2018 to $305 billion in 2025 (GlobalData, 2019). Such increasing use of video games may seem alarming to people who think that this activity is always associated with addiction and violent contents. However, after carrying out a detailed review of research, Granic *et al.* (2014) concluded that playing video games has positive effects in the cognitive, motivational, emotional and social domains. In this vein, the European Commission regarded serious video games – i.e. games for non-leisure purposes (Abt, 1970) – as a top issue in its *Horizon 2020 European Framework Programme for Research and Innovation*, which not only envisaged employment growth in the serious games industry, but also considered that this creative industry will help to face multiple challenges in education, health, social cohesion and citizenship (European Commission, 2014). It should then come as no surprise that Zimmerman (2014) describes the twenty-first century as the "ludic century", for game design will be essential in developing sociocultural structures.

In view of the above, philosophers should not leave aside the study of video games, believing them to lack in interest. By way of example, Cogburn and Silcox (2009) explained what some video games can teach us about longstanding philosophical problems. In addition, philosophers have analyzed ontological (Gualeni, 2014; Tavinor, 2011) and above all ethical (Bartel, 2015; Luck, 2009; Young, 2015) issues relating to video games from approaches as varied as phenomenological (Farrow & Iacovides, 2014), postphenomenological (Verbeek, 2005), Kantian (Waddington, 2007), Humean (Wonderly, 2008) or transhumanist (Geraci, 2012), among others. But in this paper I will adopt an approach that, as far I know, has not yet been considered to analyze video games from a philosophical standpoint: specifically, I will draw inspiration from Ludwig Wittgenstein's posthumous work *On Certainty* with two aims in mind. On the one hand, after introducing the concept of "virtual certainty", I will explain how certainties of this kind constitute virtual worlds characterized by the concordance, steadiness and immediacy of the immersive experience that they generate. On the other hand, I will show that this immersion is really achieved when the player is able to elaborate narratives based on virtual certainties in order to address two types of cases – first, when the narrative helps the player orient herself in a challenge that is just part of the game, and second, when she tries to address the seeming infringement of a virtual certainty.[1]

2. Virtual certainty: the doorway to the magic circle

Just a few years ago, in the main cities all over the world it was common to see users of the *Pokémon Go* mobile game eagerly searching for charmanders – that is, salamander-shaped monsters whose tail was alight with a flame – among other peculiar creatures. When players suddenly started running in any direction just after checking their mobile phones, one could expect that they already knew – or preferably, they thought they knew – where a charmander was hidden. According to Wittgenstein (*OC* §243), knowledge-statements must be grounded: after all, if a witness assured in a court of law that she knew something, she should show that she was in a position to know it (*OC* §441). Regarding users of the *Pokémon Go* game, they knew where a charmander was hidden because the game's radar directed them towards a particular point, but

[1] Wittgenstein's *Philosophical Investigations* – specifically, remarks concerning rule-following, language-games and world-pictures – can also be of great help to deal with these issues.

they might make a mistake in exactly locating the charmander's hiding place. Since knowledge is grounded and thus associated to the possibility of doubt and mistake, I employed above the expression "I thought I knew" that Wittgenstein (*OC* §§12, 21, 137, 366) recommends using instead of the verb "to know". Conversely, our certainties are immune to mistake. They are ungrounded ways of acting (*OC* §204) which we show in whatever we say and do (cf. *OC* §§7, 395, 431). They are not beliefs that we decide to adopt once we have a ground for it: indeed, certainties can be neither acquired (Ariso, 2016) nor lost or abandoned (Ariso, 2013) at will. We might provide many grounds for a specific certainty, but none would be "as certain as the very thing they were supposed to be grounds for" (*OC* §307). Hence, the fact that mentally healthy people share the certainty of their being alive or their having bodies means that they would not even know how to interpret a doubt thereon. In Wittgenstein's (*OC* §194) terms, when something is certain the possibility of mistake – and, by extension, of doubt – is "logically excluded". However, facing the philosophical trend of regarding logic as context-independent and valid in all possible worlds, Wittgenstein (*OC* §§196, 628) refers to the peculiar logic that emanates from our form of life. Wittgenstein (*OC* §194) remarks that this kind of certainty is objective in order to emphasize that the mentioned exclusion of the possibility of doubt and mistake must be established not subjectively – e.g. by merely claiming that one is not making a mistake – but by implicitly accepting and following the grammatical rules we all share when participating in language-games (Ariso, 2021). Yet certainties are immune to doubt exclusively within the very system – called "world-picture" (*OC* §§93-95) – made up by all of our certainties.[2] This world-picture is neither right nor wrong, as it constitutes the "background" against which true and false are distinguished (*OC* §94). But the world-picture, as it were, remains in effect only "in normal circumstances" (*OC* §§26-27), i.e. as long as there are no anomalies or abnormal circumstances (cf. *OC* §617) that would take away the foundation of all judging from us (*OC* §§490, 614), as we could then no longer distinguish between true and false.

[2] It should be noted that there is not only one world-picture. Inasmuch as different collectives may share distinct certainties, they are also partakers of different world-pictures. That is why Wittgenstein remarks that people who do not show the same certainties about a given point may declare each other "a fool and heretic" (*OC* §611). As it will not be possible to convince the other party because each world-picture admits different reasons, the only solution is to resort to persuasion (*OC* §612) by trying to give her one's own world-picture (*OC* §262).

In principle, video games seem to provide one of the least appropriate scenarios to reflect our certainties. If we consider a video game in which we are fighting with a flaming sword on wyvern-back against mythological gods, it could be argued that our certainties would have no place within such a context because it is characterized by abnormal circumstances. Of course, this does not entail that we would automatically lose our certainties – and by extension, our ability to judge – if we played this video game. Instead, it should be noted that our current certainties would not remain in effect if we really started living in that context: in this case, there would be no judgment we could be certain of because we would not be able to distinguish between true and false. Anyway, even this kind of video games retains many of our certainties: to give only a couple of examples, nearly all words preserve their meaning or are used in the same way, and the winner in a race is the player who crosses the finish line first. Admittedly, it is difficult to imagine any video game whose rules had nothing to do with our certainties: in such a case, we would not even know how to start playing such an unintelligible game. However, there may also exist certainties characteristic of a specific video game inasmuch as they have been – albeit implicitly – created by the author taking for granted that they do not remain in effect beyond the video game. Due to this reduced scope of application, I will call them *virtual certainties*. I turn now to explain what they consist of and why I regard them as certainties.

A video game is usually designed taking implicitly for granted that players must refuse to entertain any doubt about some particular aspects and rules of the game. These virtual certainties are therefore expected to be shared by the community of players, who will show them when they play the video game, but also when they talk about it: this can be seen in chat rooms on specific video games, where players have no problem understanding each other because they do not call any virtual certainty into doubt. As a result, they will not even be aware of virtual certainties when they talk about the video game: thus, they can discuss many topics like the easiest way to overcome a specific challenge, but they will not put into question that this challenge consists, for instance, in killing a three-headed snake with a dagger of pure gold hidden in a castle at the very center of the moon. A novice player who enters a chat room may state that he knows this rule because he has read the game's instructions, but then it would still be possible to make him doubt by saying that he had not rightly understood some instruction, or even that he had read the instructions of a different game. Yet the advanced player who has already assimilated that rule as a certainty might think

that whoever puts it into question either has gone insane or just does not know what she is talking about.

What has been said so far should not lead us to conclude that all video games contain virtual certainties. As a case in point, authors design simulation games – henceforth, simulators – trying to make them as close as possible to the real game – e.g. chess simulators – or to the particularities of a specific profession – as it happens with flight simulators used for training pilots. Designers avoid including virtual certainties in simulators: thus, the novice pilot may be faced with heavy storms or multiple breakdowns, but she will not be trained to dodge clouds that suddenly transform into balls of fire or granite blocks. Since simulators replicate real situations, it is not necessary to specify their game or usage rules. But if the intention is to increase the playability of a video game that contains virtual certainties, its rules and characteristics will have to be clear from the outset. To clarify this point, let us briefly consider two lists of norms that should be complied with when designing a video game. On the one hand, Dickey (2006) stated that the development of a video game should follow these steps: present the initial challenge; identify potential obstacles and develop resources; identify roles; establish the physical, temporal, emotional, and ethical dimensions of the environment; create a backstory, and develop cut scenes to deliver key information. On the other hand, Marchiori *et al.* (2012) listed these tasks to create video games through the methodology WEEV – *Writing Environment for Educational Video games* – for educational point-and-click adventure game authoring: definition of the actors; definition of the world where the game will take place, and creation of the story. In my view, virtual certainties might be added into any section of both heuristics. There are different resources to make players aware of such certainties[3]; but regardless of the chosen procedure, the game's normal conditions must be clear and stable enough not to bewilder players. In this case, normal conditions will be based on virtual certainties, so that they will shape from the very beginning a context which shows significant differences with our world-picture on particular points: it is therefore of the utmost importance that the player acquires such certainties as soon as possible in order to avoid her becoming frustrated by wandering disoriented through the game.

[3] Doing this through a progressive immersion in the video game is recommended over starting by boring the player with a detailed theoretical presentation, in which case she may quit the game even before beginning to play it.

In this paper, I will use the term 'immersion' to refer not only to the acquisition of virtual certainties, but also to the involvement in them and, by extension, in the world-picture that they give rise to. Keeping this in mind, immersion does not consist in a process that requires the fulfilment of specific conditions. Regarding the acquisition of certainties, we should not forget that they are not assimilated at will, by reaching a specific mental state, or by "following a particular line of thought" (*OC* §103). As Wittgenstein pointed out, there is simply a moment in which we "begin with not-doubting" (*OC* §150) without there being any explanation for it (cf. *OC* §148). As regards the involvement in certainties, they do not require any effort or act of will from us: instead, they are shown without our being aware of them, to the extent that we can only "discover them subsequently" (*OC* §152). Therefore, a well-designed video game must facilitate the immersion of very different players in its virtual certainties, thus giving rise to an experience conditioned by such certainties. In a similar vein, and taking as a reference the Philosophy of Information, Sicart (2019, 519) stated that "play and computation share the capacity to create worlds and shape human experience". According to him, play involves re-ontologization inasmuch as play orients experience, thereby bounding the world and giving it meaning. Drawing a parallel with Sicart's argument, I claim that, to some extent, virtual certainties – and, by extension, the world-pictures generated in each case – also create worlds. Indeed, virtual certainties orient experience because they show what can be regarded as a mistake and what is immune to doubt; furthermore, they bound the world inasmuch as they indicate what exists there; and lastly, virtual certainties give meaning to that world because they usually involve remarkable alterations in the aims of such world – e.g. the only conceivable goal in *Minesweeper*'s world is to uncover all fields without exploding any mine.[4]

It should be noted that certainties constitute attitudes (*OC* §404) which make up a world-picture, but certainties "are not reflections of how the world is" (Moyal-Sharrock, 2004, 71). Hence, certainties do not provide a picture of the real world, but of the very world which is configured by them (Ariso, 2020). That is the world to which Wittgenstein's term "world-picture" refers, and that is the sense in which I will use the concept "world" in this paper. To clarify what these worlds consist of, I will now bring up the notion of "magic circle" used in

[4] An illustrative example of how certainties may entail re-ontologization can be found in Ariso (2017a), where the analysis of Unamuno's novel *Niebla* reveals the mirror-games created between the author and the protagonist when the former enters the realm of fiction and the latter enters the scope of reality.

game studies. Huizinga (1955, 10) stated that "[a]ll play moves and has its being within a play-ground marked off beforehand either materially or ideally", to which he added that the magic circle is one of these play-grounds "within which special rules obtain". However, Castronova (2005) emphasized that such a magic circle or virtual world will necessarily be quite porous: virtual worlds will therefore also exhibit attributes deriving from the outside world – by the way, this is in line with what I said above about the necessary presence of daily certainties in video games. Furthermore, Salen and Zimmerman (2003, 95) pointed out that "the term magic circle is appropriate because there is in fact something genuinely magical that happens when a game begins". Regarding video games, I think this magical experience is, in large part, due to the immersion – albeit temporarily – in a world-picture with virtual certainties. However, the use of a simulator will keep the player in the daily world-picture, while the video game with virtual certainties may transfer her to a world other than the usual one by providing her with virtual certainties. This transfer may be as a mere viewer interested in getting acquainted with diverse aspects of the video game, but it can also be as an actor if the player ends up acquiring the corresponding virtual certainties.

At this point, it may be objected that virtual certainties hardly differ from the certainties that someone who played a traditional game allegedly might show, as is the case with children who play the role of superheroes by putting on cloaks or masks. Nonetheless, there are significant differences that may even lead us to seriously question whether those traditional games allow children to show certainties different from the daily ones. To shed light on this point, I will focus on three closely interrelated aspects of immersion in virtual certainties: concordance, steadiness, and immediacy.

To begin with, *concordance* is manifested in the fact that video games are characterized by a complex setting in which everything – characters, additional resources, and plots with all their possible courses of action – speaks for, while nothing speaks against, their virtual certainties: as Wittgenstein pointed out, what is certain is "held fast by what lies around it" (*OC* §144), to the extent that everything speaks for, and nothing against such certainty (*OC* §§89, 117, 203). Yet many traditional games lack a setting in which everything constantly speaks for their alleged certainties, so that it must be created and maintained by players themselves. This leads us to the second aspect of the immersion in virtual certainties: *steadiness*, as players show them for hours and hours without fatigue every time they play the video game or talk about it. Conversely, in many traditional games players must make a sustained and ever increasing effort to

keep developing the plot, maintain the narrative tension, and play each character. This generates a fatigue that often culminates shortly afterwards in the end of the game. If an alleged certainty were shown only for a very short time or intermittently thus requiring effort and commitment, it should be concluded that it is not a certainty, but a rule that someone attempts to follow or even pretends to follow. By the way, the video game's author is particularly concerned about the concordance and steadiness of the immersive experience in order to appropriately manage its flow.[5] This flow facilitates that the player becomes immersed in a spiral of action in which she is not even aware of the virtual certainties she is showing. Flow is also closely related to the third trait of the immersive experience in virtual certainties, i.e. its *immediacy*. If the video game is well designed, immersion will take place within a short period of time. It should not be forgotten that certainties are not acquired at will, so that it is an outstanding trait of video games that virtual certainties are assimilated not willingly, but quickly. Players often have problems to maintain the flow in traditional games, while flow in video games allows the player to acquire virtual certainties not by doing anything special: instead, it is something that just happens to her even without knowing exactly when. Here lies to a great extent, in my opinion, the charm of the magic circle which the player enters.

The immersion in virtual certainties entails that the daily world-picture remains in the background, thus without disappearing. If, at any time during the game session, the player must suddenly stop playing because the doorbell rang, she will not put into doubt – to give only a couple of examples – that she is at home, or that the individual who is at the door is a human being. But as long as the gamer is playing the video game, she will be immersed in a practice characterized by virtual certainties for which there is no room in the daily world-picture. Virtual certainties may seem minor in comparison with daily ones due to their reduced scope of application. Yet even though the mentally healthy player is certain that what she views on the screen is not a fact of real life but part of the video game, she will be entirely immersed in a practice in which some ungrounded ways of acting immune to doubt will not coincide with those characteristic of everyday life. In this sense, the daily world-picture will temporarily remain in the background. However, the fact that the virtual world-picture provisionally

[5] As is well known, Csikszentmihalyi (1990) defined *flow* as a mental state of full enjoyment, absorption and engagement in an activity without thinking of anything else. The role of flow in video games has been widely studied (cf. Cowley *et al.*, 2008). Indeed, there are scales like *EGameFlow* (Fu *et al.*, 2009) aimed at measuring flow in e-learning video games.

remains in the foreground does not entail that the scope of virtual certainties reaches beyond such world-picture. As Walton (1990, 1993) pointed out, a fictional or make-believe world is established through a set of propositions that are true only within such world. Likewise, I would add, virtual certainties work as certainties only within a virtual world-picture. And that is why virtual certainties do not provide propositional knowledge about the real world. By way of example, Cleopatra appears in *Civilization VI* as the Egyptian ruler – which constitutes propositional knowledge – but also as an immortal character – which should be regarded as a virtual certainty. Yet Cleopatra might also have appeared either as an immortal character or as the Egyptian ruler, which illustrates that virtual certainty remains independent from propositional knowledge – even though the former may occasionally be accompanied by the latter.

3. Narrative as orientation based on virtual certainties

In order to facilitate understanding of this section, I would like to start by explaining five basic concepts of video game design: I am referring to the notions of 'system', 'mechanics', 'story', 'loop', and 'narrative'. To begin with, Salen and Zimmerman (2003) define 'system' as a set of rules whose effect is play, which must be regarded within a specific cultural context. Meanwhile, and according to Brazie (2022), mechanics are the interlocking pieces of the video game that can meaningfully interact with each other to produce outcomes: thus, jumping can be regarded as the main mechanics in *Super Mario* games, yet it is irrelevant in a game where jumping has no consequences. Järvinen (2008, 254) adds that mechanics "guide the player into particular behaviour by constraining the space of possible plans to attain goals", so that mechanics are usually described with verbs: for instance, skydiving in *Fortnite*, rotating in *Tetris*, and steering in *Mario Kart*. Good mechanics facilitate that loops – understood as sequences of actions and events often repeated by the player – are experienced as satisfying. For example, questing constitutes an example of a loop composed of quest discovery, travel, objective completion and reward collection. As a result of the player's interaction with the game, every game tells a story. Some stories are not particularly interesting, but even *Pac-man's* quest to eat pac-dots while avoiding the ghosts is a story (Bateman, 2011). Beyond mere storytelling, narratives are elaborated in order to analyze the game. Yet keeping in mind that the concept of 'narrative' will play a key role in this paper, I will now explain in greater detail what narratives consist of.

We are able to interact with other people because we all make sense of the world through joint narratives which are refined and enriched over time. According to Somers and Gibson (1994), narrative is an ontological condition of social life, for narrativity allows us not only to make sense of the social world, but also to constitute our social identities. However, narratives are developed not at random, but when they are really needed. Several decades ago, Todorov (1968) already suggested that narratives entail a disruption of what is expected: specifically, Bruner (1991) remarked that narratives are strategies to fill the gap between what one expected and what actually took place. Narratives cannot thus be decontextualized. As Herman (2009) pointed out, narratives must root themselves in the lived and felt experience of human beings interacting with their fellow beings and environment, to the extent that a narrative text or discourse must encode the pressure of events on a specific human consciousness. But we should not forget that certainties are "chronologically and logically prior" to narratives, for narratives are developed taking for granted countless certainties (Ariso, 2018, 4). Therefore, within video games that contain virtual certainties players can only elaborate narratives by considering those certainties. When the player creates a narrative, however, she does not restrict herself to narrating events: furthermore, and most importantly, she uses the narrative to analyze the game and to learn a tactic (Sayol & Colom, 2017). In short, the player elaborates a narrative in order to decide what she should do in order to address a challenge.

The relevance of narratives within this paper lies in their contribution to detect whether a gamer has acquired the virtual certainties of a specific video game. Specifically, this acquisition can be analyzed through the narratives created by players to address two types of challenges. On the one hand, it may happen that a player does not know how to overcome a challenge which is part of the game, so that she may regard it as a complex task which can be fulfilled by patiently learning from mistakes or gathering negative knowledge – about how not to solve some problems (Gartmeier *et al.*, 2017). On the other hand, the player may feel disoriented by what seems to be the flagrant breach of a virtual certainty which in turn constitutes a fundamental trait of the game. Let us begin with the first kind of challenge.

In order to better understand what challenges characteristic of the game consist of, I will start by giving an example concerning daily – or non-virtual – certainties. Thus, there are video games aimed at teaching some daily certainties thus facilitating immersion in them. To this end, such video games pose everyday situations as if they were riddles to be solved. Since the player is not provided

with reasons for the certainties she should acquire – for certainties are ungrounded –, this methodology appears to be a clear case of persuasion or even indoctrination (Ariso, 2022). Yet, as Ariso (2019a) pointed out, this type of teaching procedure may be very beneficial and even necessary in order to foster immersion in our daily practices to some disabled people. A glaring example of this is *Big Party*, a video game aimed at teaching people with psychical disabilities habits and skills important for daily life such as taking care of one's hygiene, clothing and addressing other people (Serrano-Laguna, 2014). This game allows users to distinguish which behaviors are appropriate or inappropriate for the purpose intended in each case. It should be remarked, however, that narratives cannot be elaborated to account for mistakes while one is not able to distinguish mistakes from anomalies or flagrant infringements of certainties (Ariso, 2019b). Let us now see some examples of challenges characteristic of a video game, but already concerning virtual certainties related to primary mechanics.[6] Novice users of the *Super Mario* franchise will soon realize that Bowser is a very rude character who usually solves his problems by resorting to force. This can lead players to think that Bowser is always expected to act in this way; however, he sometimes uses dark magic to transform citizens in Mushroom Kingdom into inanimate blocks. If players remain alien to this virtual certainty or primary mechanics, their narratives concerning the way to overcome all challenges related to Bowser may be ingenious, but they will not fit the video game's characteristics and goals. Stated otherwise, whoever can play this game has assimilated Bowser's ability as a virtual certainty. Similarly, novice players may take for granted that Wonder Woman can use her Lasso of Truth in *Justice League Heroes* as a whip, as a grappling tool, or to round up enemies without even imagining that its main purpose is to extract the truth from such victims: after all, says Simelane (2022), a rope that makes people tell the truth does not translate well to a video game weapon. Thus, if gamers were not certain that the lasso can be used in this way, they might even create a narrative in which Wonder Woman extracts the truth from her enemies by whipping them with her lasso.

Let us now analyze the second kind of challenge, in which the player might become disoriented by the breach of a virtual certainty which constitutes a key

[6] While core mechanics are repeatedly used by players "to achieve a systematically rewarded end-game state" (Sicart, 2008), primary mechanics support the game's core mechanics: thus, Mario has wall-sliding in *Super Mario Bros*. – where jumping is the core mechanics – and *Call of Duty* has weapon reloading – while point-and-click gunplay constitutes the core mechanics.

trait of the game. In this case, the virtual certainty would concern core mechanics.[7] The fact that such core mechanics were lacking would be so remarkable that their lack would affect the very identity of the game to such an extent that no explanation could account for them. If *Minesweeper* did not require to locate mines, but to score goals; if from the level 4376 in *Candy Crush Saga* the gamer were not required to make sets of sweets, but to eat them; or if blocks should not be positioned in *Tetris* but destroyed, those games would no longer be recognized as *Minesweeper*, *Candy Crush* and *Tetris* respectively. Since all these anomalies concern core mechanics, the game would no longer be the same one. Hence, if the gamer created a narrative in order to explain such anomalies and – to give but one example – she took for granted that she still was playing *Tetris* although blocks had to be destroyed instead of positioned, we should conclude that she had not assimilated the virtual certainty that characterizes this game. Just as Wittgenstein said "This is how calculation is done" (*OC* §§39, 47, 212), it could also be claimed "This is how *Tetris* is played". At this stage, however, it might be argued that gamers would be playing *Tetris* in a different way. To shed light on this issue, I should like to briefly consider a peculiar use of *World of Warcraft* glider, a mod that lets one of the player's avatars travel along a preset path gaining experience points from the looped activity by killing, skinning and looting. According to Consalvo (2009, 412-413), some players used the glider to level avatars that they intend to sell to other players, to achieve higher levels but keeping such avatars as part of their account to play with in the future, and to level their own avatar to get to the content they assume is most valuable. Yet, keeping in mind that core mechanics remained intact, the game remained the same. The developers did not report that gamers had transformed *World of Warcraft* into a different game: instead, they regarded those activities as in violation of the video game's terms of service. As Consalvo pointed out, such activities can be better understood if they are not regarded as cheating and violations of the terms of service, but as different uses of the video game. As a result, neither players nor developers themselves would understand a narrative which claimed that, in such a case, a game different from *World of Warcraft* had been played.

[7] Core mechanics provides the foundation of the video game thus supporting its emotional drive, yet the main characteristic of these mechanics is that "without it, it's not even the same game" (Brazie, 2022): for instance, attacking in *Smash Bros*. or playing cards in *Hearthstone*.

4. Conclusion

In this paper I have presented the concept of 'virtual certainty', which refers to certainties whose scope does not reach beyond playing video games or chatting about them. Unlike mere rules, about which one can decide whether one follows them, certainties are enacted: for we show them without being aware of this and without even being able to decide when we start or finish sharing them. This aspect is clearly illustrated by virtual certainties inasmuch as they make up a world-picture which cannot be accepted or rejected at will. Although the player can turn on or off the video game whenever she wants to, she cannot decide whether she begins of finishes sharing some of its certainties. Immersion in the video game's magic circle, however, will be particularly relevant when the player needs to develop narratives based on virtual certainties. For only then will she show that any doubt about virtual certainties is unintelligible for her because she already shares them. In this context, narratives constitute an appropriate tool for detecting virtual certainties. Neither a statement that seems to express a specific certainty nor a question like "Can Super Mario jump?" will suffice to clarify whether the gamer really shares a virtual certainty, so that such a direct assessment procedure should be replaced by indirect assessment (Ariso, 2015, 2017b): to this end, it is necessary to create situations in which the individual spontaneously shows how she reacts to doubts concerning certainties. In order to indirectly detect virtual certainties, I have explained how narratives should be elaborated in two cases, i.e. when it helps the player orient herself in a challenge that concerns primary mechanics, and when the narrative is aimed at addressing the seeming infringement of a virtual certainty that concerns the core mechanics. In this manner, I hope to have paved the way for further research not only of the very notion of virtual certainty but also on its application, which may help to enrich the arsenal of philosophical tools within video game studies.[8]

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