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PALADINS WITH MUSCLE CRAMPS: IMMERSION, MMORPG'S, AND NOZICK'S EXPERIENCE MACHINE

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Abstract

When he first formulated the famous 'Experience Machine' thought experiment in 1974, Robert Nozick could only give his readers one analogy with a potential real-life 'device': psychoactive drugs. Now, decades later, MMORPG's like *World of Warcraft* and EVE Online, with their promise of delivering immersive pleasure to their users, have been dubbed as experience machines. However, some have argued that MMORPG's cannot be what Nozick had in mind when he developed his thought experiment for two reasons: because of the interaction between users mediated by avatars and because they lack sensory-immersion. We discuss how both arguments fail to address the necessary conditions for a truly Nozickian experience machine: (i) guaranteed immunity from any stimuli generated in the circumstances of the "real", physical world and (ii) lack of awareness, while being plugged in an experience machine, of the actual source of an experience. Even though MMORPG's cannot be experience machines in the sense of the original thought experiments, they might still provide an opportunity to address the original concerns that Nozick had regarding hedonism, or other, more recent (but closely related) as escapism through technology.

Keywords*: Robert Nozick, Experience Machine, MMORPG's, immersion, digital games, escapism.*

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1. When Nozick Meets Blizzard

Have you ever been so caught up in a novel you were reading while commuting in a subway train that you realized in shock to have reached the end of the line, way past your destination point? Did you ever "warn" the character in a movie that she was unknowingly heading into an ambush? Have you ever experienced playing a video game with such an intensity that the line between the game world and the real world became blurred? Maybe none of these ever happened to you. But if you think such occurrences are plausible for some (other) people, then there is room for at least the hint of a worry.

What if the technology were available to make persistent this sort of experience? What if, at the limit, one could live one's entire life in such a state, and it would all be about playing and having fun, shielded from any unpleasantness? What if, to raise the bar even higher, one wouldn't be alone in this, but interacting with others, in something very similar to a society?

We aim here to look at one particular present-day technology that might deliver on the promise. Our question, in more technical terms, is: can MMORPG's be experience machines of the sort described by Robert Nozick in his famous thought experiment[4]? Of course, video games have already been around for a long time, becoming part of our culture and, for many individuals, part of their lives. But many feel that there's something special about MMORPG's that raises difficult challenges. In Taylor's words, "what gives Nozick and contemporary philosophers cause for consideration is that MMORPG's are closer in essence to the experience machine than they are to traditional games. These games offer persistent, immersive (though not sensory-immersive) worlds, and people sign onto them specifically for pleasure." (2007, 71)

We think this is not just an abstract philosophical question. The stakes can be quite high, and they touch both a conceptual and a more practical level. A positive answer could become the source of legitimate

[4] MMORPG stands for "massively multiplayer online role-playing games". They are our main focus here, but the question might be equally valid for other types of "synthetic worlds" (Castronova 2005), such as MUDs (multi-user dungeons) or MMOWs (massive multi-user online worlds).

concerns about online computer games: it would appear that a huge number of individuals are willing or even eager to give up authentic experiences in favor of artificially induced simulacra. Games might turn out to provide the perfect meeting ground between popular expressions of such worries (how many people, if presented with a real choice, would take the blue pill from *The Matrix*?) and the refined accounts of philosophers deploring the on-going "murder of the real". Even if, they contend, the crime is already taking place in our ("real", in a gamer's terms) world, it can become complete only in a virtualized one: "this perfect extermination could only be achieved if the process of virtualization were fully realized." (Baudrillard 2001, 63).

Our thesis here is that, at least when it comes to MMORPG's, such intense worries are not warranted. Although the state of "being plugged" presupposed by the experience machine falls in the same category as the immersion discussed both by scholars and the gaming community, we will argue that it is of a special and extremely demanding type, one that MMORPGs cannot replicate yet, and it seems unlikely they will in the foreseeable future.[5] We shall describe this special kind of immersion and distinguish it from other types. In the last sections of the paper, we shall discuss other attempts to answer the same question and explore some possible implications of the argument.

2. Nozick's Garage. The Experience Machine

Developed by Nozick (1974, 42-45) and alluded to in his subsequent works (1981; 1989), the 'Experience Machine' (EM) has elicited in the past decades a wide array of acclaim and critical responses. It is located in what might seem a strange context, in a chapter dedicated to a discussion regarding moral constraints and the state. More precisely, it follows his normative stance of how libertarian side constraints work and an assessment of the possible ways in which we should approach

[5] We remain agnostic though about the possibility that other future technologies might provide more accurate approximations of the conditions in the original thought experiment.

animal ethics. Would utilitarianism, Nozick wonders (1974, 39-41), be an adequate ethical theory to address the issue of how humans should treat animals? Couldn't there be something else relevant for animals, other than their felt experiences? What about our case, as human beings: is there something else that should matter to us, besides our felt experiences?

This is how Nozick gets to the EM, through a "digression within a digression within a digression" (Feldman 2011, 63). Before analyzing the implications of the thought experiment, let's see how it unravels: "[s]uppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences?" (Nozick 1974, 42). There is no cap on the possibilities you have while inside the EM, as you could pick whatever you want from an open library of potential experiences and, after two years, choose a different scenario. Moreover, if you fear losing your relatives or loved ones, rest assured: they would also have the opportunity of plugging into the EM. Should you, Nozick asks his readers, live all your life inside the EM? Is there something else that matters to us, besides "how our lives feel from the inside?" (Nozick 1974, 43).

The short answer, Nozick posits, is that you shouldn't. His intuition is that, by imagining such a hypothetical scenario, we learn that there is something else that matters to us besides sheer pleasurable experiences while being plugged into such a device. First, "we want to *do* certain things, and not just have the experience of doing them. […] A second reason for not plugging in is that we want to be a certain way, to *be* a certain sort of person. Someone floating in a tank is an indeterminate blob. There is no answer to the question of what a person is like who has been in the tank. Is he courageous, kind, intelligent, witty, loving? [...] Plugging in is a kind of suicide […] Thirdly, plugging into an experience machine limits us to a man-made reality, to a world no deeper or more important than that which people can construct. There is no *actual*

contact with any deeper reality, though the experience of it can be simulated"(ibid.).

Later on, while exploring the issues of happiness and meaning of life in *Philosophical Explanations*, Nozick addresses again the third reason for not plugging into the EM: such a life would be enclosed "within the circle of just your own experiences" (1981, 595). He arrives at the same point one more time, asserting that the question of plugging in is a question of value. The issue is not whether or not it would be preferable to enter the EM if you live a miserable life, but whether being connected to the machine is the best life you could have. While in the EM we are opaque to how reality really is: "what we want and value is an actual connection with reality […]. To focus on external reality with your beliefs, evaluations, and emotions, is valuable *in itself*, not just as a means to more pleasure or happiness" (Nozick 1989, 106).

The question of what Nozick intended to prove with this thought experiment has puzzled philosophers and psychologists for the last couple of decades. Feldman (2011, 64) hypothesizes that there are four main possible ways in which we could interpret the EM:

(1) a critique to utilitarianism;

(2) a critique of ethical hedonism as a theory of individual welfare;

(3) a potential knockdown argument against all mental state theories of welfare;

(4) a critique of psychological hedonism regarding human motivation.

A tentative overlapping consensus between scholars is that the EM tried (more or less successfully) to provide a fatal blow to hedonism, broadly understood (Crisp 2006; Barber 2011; van der Deijl 2019; Vitrano 2020) or to desire satisfactionism (Lowe and Stenberg 2017). Still, some openly criticised Nozick's design and use of the EM. For Pietrucha (2017), not wanting to plug might not have anything to do with whether or not we see any intrinsic value in living in reality, but with our imaginative failure. Weijers sees the EM as what Dennett called an 'intuition pump': the thought experiment is designed so as to lead the respondents to a particular response based on intuitions. What might explain Nozick's intuition that people would not want to live their lives plugged into the EM is the status quo bias (Weijers 2011; Belshaw 2014). The objection is vindicated by some experimental evidence with testing

the EM (De Brigard 2010; Weijers 2014). Löhr (2018) examines whether there are any differences between how laypersons and people with a background in philosophy respond to EM-like scenarios and concludes that most people without a degree in philosophy do not reject plugging in because they reject hedonism, but due to other reasons, like the possibility that the machine could malfunction. All such experiments have been, in turn, criticized because the subjects (most of them college students) cannot be "in the state of confronted agents" (Smith 2011) or because a real empirical test would be with regards to something that Rowland (2017) dubbed the "Undistorted Experience Machine".

Whether or not Nozick wanted to fight the 'utility monster' or against hedonism and whether or not he was successful in his venture is an issue on which we take no stance here. But our argument might have some indirect implications for the idea that we could empirically test people's reaction to EM's or EM-type of situations. Nozick himself makes an analogy between the imagined device and psychoactive drugs, "which some view as mere local experience machines" (1974, 44). Could MMORPG's also be EMs in Nozickian terms? If yes, then experimental philosophers would have endless avenues open for empirically testing our intuitions regarding utilitarianism, ethical/psychological hedonism or mental state theories of welfare. For that to happen, we need to take a closer look at what immersion in gaming entails and whether agents are in a similar state then the ones who would plug in to Nozick's EM.

3. Gaming and Immersion

Defining immersion in video games is a difficult task, for a number of reasons. Video games have a dual nature, at the same time being objects of art and of digital engineering. The quality of the experiences they provide is inherently subjective and, as such, difficult to pin down in a definite classification and/or measurement. No matter how thorough a scientific investigation we may provide, one will always find a transgressive example that defies what seemed obvious and hard to contradict. A gaming experience works differently than a user experience for an operating system or text editor, even if the means of interaction

are seemingly the same. A confusing and convoluted user interface may work for and not against the success of a game (an example is the *Dark Souls* series).

Immersion, what some in the industry have called the "Holy Grail" of gaming, is an ever-present term in the conceptual space of video games (Rolling and Adams 2003). Game developers praise their creation as "the most immersive game ever made", reviewers around the Web acclaim games that provide immersive experiences, and deplore "immersion-breaking" elements. There is even a whole genre of video games that get its name from this moniker: the immersive sim (the *Deus Ex* series, the *Thief* series, the *BioShock* series and many other milestone games). Given its widespread use and importance, it is no accident that immersion has prompted many scholarly attempts to catch exactly what gamers mean when they call their gaming experiences immersive.

These studies can be grouped into more empirical approaches, which take the form of sociological or psychological studies into the experience of games, or more personal approaches (for lack of a better word) which use the authors' own experience with the medium as the cornerstone of the study.[6] For the purposes of this section, we will concentrate on empirical approaches, given the highly subjective nature of the gaming experience. Providing a comprehensive definition for immersion is outside our purpose. Instead, we aim to extract from the literature the traits of immersion in games most people experience, and then compare those with the kind of immersion presupposed by an EM.

We do acknowledge, however, some caveats of the empirical studies: small and skewed samples of the population (game players come from all walks of life, not only computer science departments) and a sometimes problematic choice of the games. The gaming industry moves at an astonishing pace, as well as the preferences of its fans: what used to be a state of the art photo-realistic experience ten years ago looks rather ridiculous today to the same player. This is why using an old game like Tetris (Sigailov-Lanfranchi 2019) to explore immersion in contemporary times might not yield warranted empirical results. MMORPG's come

[6] A third, but less common, possibility involves a more conceptual approach. Calleja (2011) is an example.

with challenges of their own for these studies – they are conceived by their developers as a service to be continuously improved, not a standalone game. The *World of Warcraft* of today is not, in many ways, the same game that it was ten or five years ago.

One of the first qualitative studies to provide a theory of immersion was published by Brown and Cairns (2004). They found that gamers distinguish between different degrees of immersion in the games they enjoy playing. Brown and Cairns went to crystalize three levels of immersion: (i) engagement – gamers simply learn to play the game investing time and effort; (ii) engrossment – gamers dedicate a significant part of their attention to the game and also become emotionally involved in it; (iii) total immersion – when the player is completely involved in the game and cut off from reality. Brown and Cairns use the word "presence" in the case of total immersion, but further literature on this subject seems to indicate something else by "presence", a spatio-temporal location of the player "in the game". Not all immersive games need something like this. For our purposes, though, MMORPG's usually involve some form of presence through player-avatars exploring and interacting in and with extensive and complex virtual worlds, so Brown and Cairns' evaluation can apply.

Building on this earlier work, Jennet *et al.* (2008) tried to obtain a way to measure the extent to which players feel immersed while engaged in a video game. The result was a questionnaire built from 31 Likert scale questions that was validated through a large-scale study (Jennett *et al.* 2008, 658). Jennett *et al*. also maintained that "immersion is a concept which we argue is important to gaming, transcending existing cognitive theories of flow, CA [cognitive absorption – n. red.] and presence. Immersion is an experience in one moment in time and graded (*i.e*. engagement, engrossment, total immersion). Immersion involves a lack of awareness of time, a loss of awareness of the real world, involvement and a sense of being in the task environment" (Jennett *et al.* 2008, 657).

The main result of the study is that the concept of immersion was irreducible to other manners of characterizing the experience of playing digital games. The theories of flow, cognitive absorption and presence that Jennett *et al*. mention in the quote above are not chosen

accidentally, as they may be used to describe the phenomena involved by immersion. Thus an appeal to a specialized study of immersion would provide fertile research. More importantly, their study suggested that five "clear factors" could be involved in achieving immersion – three personal factors (cognitive involvement, real world dissociation and emotional involvement) and two game factors (challenge and control).

As excited as gamers, developers and journalists could be about calling the latest hit in the video gaming industry "immersive", what they may actually be saying is that they've entered a state of flow while they were playing the game, the game-world managed to overtake most of their cognitive processes or that the sense of presence in the game was masterfully achieved by the game's creators. Jennet *et al*. and other studies (Cairns *et al.* 2014, 343-345) argue that the conflation of immersion with these concepts is mistaken.

We'll briefly look at each of them in turn. "Flow" is a concept used in positive psychology that was developed by Mihaly Csikszentmihalyi (1975) and it represents "the feeling of complete and energized focus in an activity, with a high level of enjoyment and fulfillment" (Chen 2007, 31). The idea is to be fully concentrated on performing an activity (which can be anything, from washing clothes to particle physics research) and for it to give a sense of achievement and gratification. In his later work, Csikszentmihalyi identified the eight components of being in a state of flow: the activity must require some skill, a merging of action and awareness in the subject, clear goals, direct feedback, concentration on the task at hand, a sense of control, a loss of self-consciousness and an altered sense of time (Csikszentmihalyi, 1990). The role of flow in video games has been the focus of some research. Jenova Chen (2007), for example, has argued that games should be designed in such a way that the experience of flow is encouraged and has provided a methodology to help developers achieve that.

Despite superficial similarities, flow and immersion are distinct, even if related states of mind. Firstly, "immersion is more of a graded experience whereas flow is an all-or-nothing sense of being <in the zone>" (Cairns *et al.* 2014, 344). Secondly, being in a state of flow may not be necessary for achieving immersion. Some games, especially horror games like *Amnesia: The Dark Descent* or *Alien: Isolation*, deliberately

disrupt the flow of a player engaged in gaming activity like gathering resources and solving puzzles to increase tension and increase immersion. As Cairns *et al*. also note, a game does not need to provide a clear goal to foster the immersion of the player – sometimes great graphics, sound and story are enough (Cairns *et al.* 2014, 344).

Cognitive absorption is a personality trait that speaks about a subject's willingness to become involved with their general use of technology, while the state of immersion results from the active interaction between player and video game (Agarwal and Karahana 2000). One can possess the characteristic of cognitive absorption without being immersed in the game-world, thus, the two concepts should be accounted for by different means.

Lastly, having a sense of presence is not required for a player to be immersed in a game. The simple reason is that not all immersive games provide the player with an avatar that interacts in a meaningful way with the digital play space. Some puzzle games or strategy games may be immersive even if they don't look the part and don't give the player the actual sensation of "being" in the game. Presence would surely help immersion, but is not required.

Ermi and Mayra (2005) have proposed a model of immersion that provides three types of immersive experience for the player: sensory, challenge based and imaginative. Sensory immersion is the type of immersive experience that arises when a player is involved in a graphically intensive game. Visual and auditory stimuli afforded by the game are the main ways in which the player is immersed in the game world. Challenge based immersion is related to the difficulty of the game and skill required from the player to achieve success in the game (the *Dark Souls* series is a good example of immersion through high difficulty). Imaginative immersion is achieved by the player's imagination being stimulated by a game's narrative or emotional content. Rather than giving an account of the different levels of immersion that can be provided by video games (like Brown and Cairns 2004 and Jennett *et al.* 2008), this model tries to account for the different ways a game may "trick" the player into being immersed into its digital world (Ermi and Mayra 2005). The model was refined by Arsenault, who replaces the notion of challenge based immersion with systemic immersion – the

rules of interaction provided by the game replace the general rules of interaction with the real world in the mind of a player immersed in a game experience. The game needs not be difficult, but have game mechanics doing a good enough job so that the player has the illusion of performing a "real" activity, despite the fact that she is holding a game controller or just pressing buttons on a keyboard. Arsenault also proposed the replacement of imaginative immersion with fictional immersion, as it is the game's fiction that stimulates the imagination of the player (Arsenault 2005).

Another conceptualization of immersion was proposed by Adams. Here, we also have three types of immersion, but they look at immersion from the perspective of the different ways a player may interact with the game. These types are tactical, strategic and narrative immersion. Tactical immersion occurs in moment-to-moment gameplay and is related to the decisions required from the player in negotiating the immediate challenges in the game. Strategic immersion can appear in games that provide long-term goals to their players (most contemporary games do that through various forms of upgrade systems for their avatars, for example). Narrative immersion, as discussed regarding the previous model, is the type of immersion that takes place when the player becomes emotionally involved with the game's story and setting (Adams 2004).

Haggis-Burridge (2020) provides yet another range of classifications for immersion: (i) systems immersion (players are engaged by the game mechanics and are in a state of flow); (ii) spatial immersion (players feel like they are actually present in the virtual world); (iii) emphatic/social immersion (players develop an emotional connection towards the characters in a virtual world – the characters can be artificial or actual humans); (iv) narrative/sequential immersions (players feel a compulsion to see how a game's story unfolds or to explore new regions of the game's world and mechanics).

MMORPG's are video games that also provide a strong social aspect to gameplay: players engage in the game's challenges together, form communities and interact with one another in all aspects of gameplay. To narrow down immersion for MMORPG's, we need to look at how the presence of other players in the game-world can affect

immersion. There is some evidence that a social setting actually increases the immersion of the players (Cairns *et al.* 2013), but we will return to this point in Section 5.

It is worth noting that not all research agrees that immersion should be conceptually distinct from flow. Michaillidis *et al*. (2018, 4) argue that the studies cited in this section fail to conceptually differentiate between flow and immersion in a convincing way as there is no research to prove that some games are better than others at triggering flow over immersion or the other way around.

To sum up, research into immersion is not ready to provide a one size fits all definition of the concept. We can however note some common themes that appear in all the models we have reviewed here. One important way in which video games achieve immersion for their players is given by the means through which the player interacts with the games: Jennett *et al*. speak about challenge and control, Ermi and Mayra (and Arsenault as well) underline the importance of good game mechanics in getting the players immersed and Adams' model has two main components that relate immersion to the tactical and strategic aims a player's actions may have in game. Even if immersion were not distinct from flow (Michaillidis *et al.* 2018), the same conclusion would plausibly hold: to be immersed, players need to feel that they are actually doing something, that they are getting rewards based on actions they have achieved in the game world. As such, it seems safe to say that providing the player with a sense of agency in her interaction with a digital game is capital to achieve immersion. The player needs to have her skills tested and her actions be meaningful to truly feel immersed. She needs to feel like she is the one who is living a digital life and that her decisions do indeed carry some weight and consequences. While other mediums (like film or literature) may get to some form of immersion through visual or imaginative stimuli, video games' specific type of immersion require a sense of achievement through doing and not only feeling. MMORPG's with their complex systems (crafting, combat, base-building, etc.) manage to provide that along with social aspects that enhance immersion. Given that this concept of immersion can be plausibly tied to the notion of player agency, it remains to see whether one could actually be immersed in an EM.

4. Being Immersed in the Experience Machine

If the EM had been the product of a major game developer, instead of a philosopher's figment of theoretical imagination, it would have been surely marketed as the device for the ultimate immersive experience. Gaming companies are not shy as a rule when bragging about the immersion their products are able to elicit from users, and if a fully EM-like technology were available, they would probably not hesitate to seize the marketing opportunity.

At least at a first glance, such counterfactual boastfulness seems justified by a certain overlap or similarity between the state of "being plugged" into the EM, described by Nozick, and the state of immersion sought by the gaming community and studied in the literature we reviewed above. In both cases, the subject is somehow cut off from the reality outside the machine or the game world, and thus opaque to the inputs it generates. But this perceived overlap deserves a more in-depth scrutiny.

One can describe the Nozickian state of being plugged as a special kind of immersion; it wouldn't be a particularly unfortunate choice of words. What are the specific features of this type, however, can make quite a difference when set against its gaming counterpart.

Two main conditions, in terms of immersion, should be met by the EM in order to be able to do its purported job:

(1) There is a guaranteed and complete immunity of the subject from any stimuli generated by changes in the circumstances of the "real", physical world

(2) While being plugged in, the subject cannot be aware of the actual source of her experiences ('while in the tank you won't know that you're there; you'll think it's all actually happening' (Nozick 1974, 43), even if the initial decision to connect to the EM were voluntary.

These two conditions could arguably be collapsed into a single and more general formulation ("guaranteed immunity from any stimuli or thoughts not generated by the machine through the simulation of

preprogrammed events and experiences")[7]. The choice to draw an analytical distinction between them is still justified by the fact that they are meant to capture two different but equally necessary sets of requirements. The first relates to blocking the possibility to receive stimuli from the world outside the machine, the other to the subject's complete lack of awareness as to the source of her experiences.

We encounter quite similar, though not identical, presuppositions in other famous philosophical thought experiments. The prisoners in Plato's Cave allegory (*The Republic*, 514a-520a), for example, only see the shadows projected on the wall in front of them by the puppet masters and, moreover, they mistake the shadows for real objects. But, as John Finnis once insightfully observed, choosing to plug into the EM "would be to bury oneself in a tomb much deeper than Plato's cave; the experience would, *ex hypothesi*, be more veridical than that of Plato's prisoners, but the actual divorce from reality would be more total than theirs, since they could *actually* communicate with, for example, those who, having ascended to a clear view of reality, had returned to tell them about it" (Finnis 1983, 41). Nozick's 'indeterminate blobs' are not presented with any such opportunity.

The EM is such an enormously troubling thought-experimental setup precisely because it presupposes (1) and (2). If one or both were absent, the machine would be just a mere pleasure machine that can be turned on and off at will or can be easily overridden by changes in circumstances (either exterior or in the subject's volition).

Imagine the superduper neuropsychologist offering you a similar deal to the one in the initial scenario (electrodes attached to you brain, simulating the experiences of your choice and all that), but with some further provisions written in small print: (1) your ride can be interrupted at any time by external events for which the machine operator takes no responsibility (like your phone ringing, or somebody entering the room) and (2) at every point while being plugged in, you are aware that your experiences, though extremely vivid and intense, are artificially generated by the EM. It would be like an experience rollercoaster: the excitement is

[7] These two conditions have been previously discussed by Tavinor (2009; 2017). We elaborate on his insight by explicitly identifying them as conditions for immersion.

real, and the Luna Park around fades almost completely into oblivion, but you are still well aware that it's the rollercoaster ride giving the excitement. Such a scenario might raise some interesting philosophical questions about hedonism and valuable pleasures on its own, but they would be different, and probably less dramatic, than those springing from Nozick's EM. And it definitely wouldn't be about "preprogramming your life's experiences"; nor would the plugging in amount to the sort of "suicide" that Nozick mentions, after which "[t]here is no *actual* contact with any deeper reality", but only with the artificial one simulated by the machine.

Let's call this special type of immersion presupposed by the EM "full immersion" and set it against the most comprehensive kind achievable through the technology currently available and deployed in MMORPG's.

Brown and Cairns (2004) and then Jennett *et al.* (2008) distinguish between three different grades or levels of immersion: engagement, engrossment and total immersion. At the highest level of total immersion, "gamers described a sense of presence, being cut off from reality to such an extent that the game was all that mattered." (Jennett *et al.* 2008. 642). It is acknowledged by the authors to be a rather short-term, rare and unusual occurrence, in which gamers feel part of the gameworld and forget that they are just playing the game.

However, even this highest level of immersion in games (admittedly, the closest to an EM-like situation) fails to meet the requirements that are presupposed by Nozick's counterfactual scenario. True, in total immersion players detach themselves from the reality and the game is all that matters; this description might at a first glance be taken as an approximation of (2). But the wording here is indicative of an important nuance: the game is "all that matters", not "all there is". The way gamers describe their experience points to a state in which they are so much 'into' the game that they lose any interest in the outside world and do not register events that happen in it (*e.g.* they don't hear sounds, or realize they are hungry, etc). But it does not seem to be a state in which all awareness of the fact that they are actually playing somehow ceases. Immersion in MMORPG's, no matter how deep, is based on the players retaining some agency (if only for gameplay decisions), while the EM scenario is built on the opposite assumption.

Let's assume, however, that gamers descriptions are inaccurate and it does cease, even if for a short time only (but long enough to count – or we can disregard the time span requirement altogether for the sake of the argument). So, in this highly far-fetched scenario, the second condition would be met. What about the first though?

Many gamers know the frustration of experiencing a muscle cramp in the real world, just as the avatar's battle against the last boss in the dungeon reaches its climax in the virtual one[8]. Such physiological events are as much outside the control of the technology as the changes in the physical reality are. Sensations of pain, hunger, cold, etc are prone to break immersion or flow. The player can, of course, choose to keep playing regardless, in the same way that a professional athlete can choose to play an important game through a painful injury. But the simple fact that such a decision is taken indicates the end of, or at least a pause in the immersive experience. Similar effects are produced by disruptive events in the physical world, like noises, or by sudden and guilty realizations of the "oops, I was supposed to submit a school project today" kind.

This lack of a complete and guaranteed immunity with respect to other external stimuli, as well as the sometimes unpleasant awareness of the fact that you're just playing and not actually *in* the game world, would be fatal malfunctions for an EM. If Nozick's super scientist sold a subscription to one of the MMORPG's currently available on the market as the ticket for an EM ride, maybe the gullible client should ask for a refund.

To phrase it differently, playing MMORPG's, although immersive in many significant ways, is not quite the same as having the preprogrammed experience of playing MMORPG's while fully immersed into the EM. As Tavinor (2017, 100) argues, "the experiences afforded by the virtual worlds of video games are not indistinguishable from those of the real world, because games provide only limited sensory channels to their

[8] The example may sound cartoonish, but there are a number of injuries and diseases with very high incidence among professional or heavy gamers (carpal tunnel syndrome, stenosing tenosynovitis or the so-called tennis elbow) and that can become severe enough to endanger or even end their gaming careers. Cf, for example, dr. Levi Harrison, interviewed by Emanuel Maiberg (2015) for *Vice Magazine*.

artificial worlds, comprising audio-visual depictions, and sometimes very limited tactile or haptic feedback".

But then, it is not the MMORPG technology functioning as an EM, but the machine itself. We'll return to this point, and make some further considerations about the implications of our position, after a brief critical discussion of two other arguments in the literature exploring the same issue.

5. Assessing Other Objections: From Sociality to Sensory-Immersion

Several other objections (Silcox and Cogburn 2009; 2014; Taylor 2007) have been advanced in relation to the possibility of MMORPG's acquiring the status of EM in the sense that Nozick discussed. While both capture something relevant, they do not go far enough. Our purpose in this final section of the paper is to show why both arguments fall short..

Silcox and Cogburn see the emergence and evolution of MMORPG's like *World of Warcraft* and *EVE Online* as a potential avenue for testing our intuitions regarding Nozick's machine. With the technology employed in video games that we have at our disposal we are in a much better position to do this, but "the person who chooses to inhabit Azeroth for even a very substantial portion of his life would of course be in a somewhat different position from that of the hypothetical person'' (2009, 57) who chooses a wide array of experiences from the digital library of the superduper neuropsychologists. Their main argument is that an MMORPG cannot be an EM because of the particularities of the interactions between users, mediated by avatars: "[t]he massive multiplayer aspect of WoW is precisely why it is not an experience machine in Nozick's sense. When characters are in guilds, their players in "the real world" have formed a community to assist one another, and one's play does affect the lives of other players' characters

as well as the people playing them'' (Silcox and Cogburn 2009, 59-60). A device like the EM, they add, would only simulate such interactions[9].

In a later paper, while arguing against Nozick's claim that no person would want to plug into the EM, Silcox and Cogburn distinguish between Virtual Reality technologies and the Virtual Reality while you're plugged into the EM, highlighting a fundamental ontological presupposition of Nozick's thought experiment. While inside the EM you would live in a solipsistic world, in MMORPG's like *World of Warcraft* "players play in groups and people rightfully judge one another by the behavior of their avatars'' (2014, 570).

In our opinion, this objection, while valid, cannot be a knockdown argument against the possibility of MMORPG's becoming EMs. If immersion is a subjective experience, would it really matter that the interaction between users is mediated by online avatars? As long as the stimuli are 'felt' inside the gameworld, their source is irrelevant. They might as well be generated by the AI of the game, as there are a series of interactions with bots inside the worlds of different MMORPG's.

The social aspect of gaming has also been an aspect discussed in the scholarly literature more specialized in video game studies. Along the same lines as Silcox and Cogburn, Sweetser and Wyeth have considered sociality as detrimental to immersion, as being aware of other real persons involved in the game should break the illusion of the virtual (Sweetser and Wyeth 2005). Other authors (like the previously cited Ermi and Mayra) have concluded that social interaction is a marginal element in relation to the degree in which players may become immersed with a digital gaming experience.

The apparent tension between immersion and sociality has been called into doubt by three experiments devised by Cairns *et al.* (2013). Using the games *WoodPong*, *Midtown Madness 2* and *MarioKart Wii*, the researchers tested whether players felt more immersed when playing against a computer, against another player through online multiplayer

[9] It might be worth noting that our argument does not rest on a reading of Nozick's EM that is different from the one employed by Silcox and Cogburn. Our aim is just to show that there are stronger reasons supporting the claim that both ourselves and Silcox and Cogburn put forward.

or against a co-located player. While there wasn't enough evidence to support a meaningful difference between playing against a player at a distance or in the same room, it was found the playing against the computer was a much less immersive activity rather than playing against other people, contradicting previous views on this subject (Cairns *et al.* 2013, 1072-1076). The results of this study support our reply to Silcox and Cogburn's objection, as they show that playing games in a social environment actually works for immersion rather than against it. As MMORPG's are essentially social experiences, if done right, they may prove even more effective tools for immersion than other single player experiences.

A different objection was raised by Taylor (2007). Assessing the implications of MMORPG's for philosophy, he conjectures that games like *World of Warcraft* are almost EMs, but not quite. They do offer immersive, pleasurable and persistent experiences to the players who log in, but there is one major difference: MMORPG's are not sensory-immersive and hence they do not manage "to allow the players to perceive the fictional reality as if it were real'' (Taylor 2007, 71). For a game like *World of Warcraft* to acquire the status of an EM it would need to make us ''forget anything we know about the real world ... [and] sever our link with anything that we have been or done in the real world'' (Taylor 2007, 74).

In saying this, Taylor addresses in his argument one of the philosophical presuppositions behind the thought experiment: for an MMORPG to be an EM, it should be sensory-immersive in the sense that the player cannot be aware that the fictional reality is just, well, fictional. It is in this sense that the sensory-immersion Taylor writes about is similar to the standard reading of the Nozickian setup of the thought experiment: while floating in the tank but being plugged in you cannot be aware of the actual source of your experience, namely the AI of the computer your brain is connected to. The same should happen while playing MMORPG's if they were to be considered EM.

While provoking and in line with some of the philosophical assumptions of Nozick's thought experiment, sensory-immersion seems to also fall short of the role of best candidate for explaining the difference between MMORPG's and the EM, though it might shed some

light on the issue. Taylor wrote his article in 2007, when MMORPG game design and technology were still in their post-infancy period. Since then, both game design and technology evolved at an amazing pace in the direction of sensory-immersion of MMORPG players, with a big plus for technology. To take just one example, think about the endless possibilities that can be made available by the Oculus Rift, Valve Index and other VR headsets, though the costs are still pretty high for average young users.

For $400, gamers can buy an Oculus Quest headset that ''has the inherent potential of manipulating people's mind with a superlative 3D experience'' (Desai *et al.* 2014, 175). For an additional $249.99 you can also get a VR Sensory-Immersion Generator, which will bring the full sensory-immersion Taylor wrote about. The product is actually marketed taking into account and highlighting the demand on the market for such sensory-immersive devices, triggering our senses of touch, smell and taste into the game. It basically aims at enhancing virtual reality experiences through sensory-immersion. Valve's Index headset goes even further, as its motion controllers can detect and simulate the action of each finger in the real world, thus allowing players to actually grab, point, push or pull in the virtual world with the same hand movements they use in their daily lives.

Game critics are also enthusiastic about the potential of developing VR MMORPG's, though their costs might be prohibitive for the time being (Ilano 2016). We have shown that sensory-immersion is not impossible. However, MMORPG's, even incorporating this new and emerging VR technologies, would still fall short of being considered EMs. First of all, they would still fail to guarantee the user/player immunity from external factors like pain or hunger. Secondly, playing a VR MMORPG, regardless of how immersive it might be, would still rely on the "attitude of make-believe and the player's acknowledgement of the artificiality and fictionality of the world in which he or she plays" (Tavinor 2017, 100). Furthermore, many of the contemporary improvements to VR gaming aim to provide a greater and more precise interactivity with VR game worlds. The aim of VR developers seems to be to increase the ability of the player to achieve greater agency rather than just provide a better passive experience of the virtual space.

6. Implications and Further Discussion

Up to this point we have argued that MMORPG's, at least in their current technological stage of development, are not EMs in the sense of Nozick's thought experiment. They fail to satisfy the necessary conditions and, for the predictable future, it is rather unlikely that things will change dramatically. There are two happy and straightforward implications of our argument. First, we still have quite some time left to think through the possible answers to the difficult questions raised by Nozick's hypothetical scenario, before MMORPG technology turns them into actual life choices. Second, the worry that gamers are in any clear and present dangers of becoming the 'indeterminate blobs' Nozick mentions, as a result of MMORPG technologies, is unwarranted.

Both implications, however, are in need of some qualifications. Let us start with the second. Maintaining that a particular worry is unwarranted has no bearing upon the way we assess other related sources of concern. We are not trying to say that MMORPG's, and digital games in general, are fully proofed against a large array of ethical, psychological and social concerns, some of them possibly related to the immersive qualities of games. Addiction, to name but one, is already a well-documented threat. There is a bounty of evidence available about its effects, both anecdotal (in media coverages and cases from almost everybody's circle of friends and acquaintances) and scientific (we follow the extended overview available in Klemm and Pieters 2017). Neglect of health and hygiene, failures in professional and family lives due to the amount of time and energy spent for playing are among the possible outcomes listed. One notable difference they mention between addiction to games and other addictions (to drugs, alcohol, smoking etc) is the lack of the physiological dimension encountered in the latter. But we may reasonably conjecture that immersion is what contributes instead to the addiction in the case of games. It might not be totally meaningless to ask how far an analogy between the addicted gamer and Nozick's indeterminate blob floating in a vat can go; but we hope to have shown that it is only partial, and that the missing components are significant. Moreover, the worrisome self-destructive effects of addiction seem to be quite similar across the

board, irrespective of its object (addiction to sports betting might be more widespread, for example, while having neither a physiological, nor an immersion component).

Turning to the first implication, it might be worth observing that, although MMORPG's do not offer us the option to plug into an EM, they do offer an opportunity to experience some artificially-induced pleasures and to break away for a while from the troubles and constraints of everyday, 'real' life, especially if the agent does not regard it as fulfilling enough. Inasmuch, they could serve as a more vivid illustration of the high stakes behind the philosophical questions about what pleasures are valuable.

The related topic of 'escapism' has been also widely discussed recently in the literature on computer games, with MMORPG's being seen sometimes as a setting for active escapism (Kuo *et al.* 2016). Moreover, escapism has been directly linked with immersion. An interesting result in the qualitative study by Warmelink *et al.* (2009) is that gamers equate one of the eight identified forms of escapism with hardcore immersion. In this sense, casual gaming cannot be escapist (but we should notice that at least four other forms mentioned by the authors might be related to the immersive qualities of the game). We do not wish to deny the importance of the issue for today's societies, nor take a particular stance in the debate. Still, it seems to us that when assessing escapist behavior, questions about the *escaper* and about the reality she is trying to escape *from* are *prima facie* just as important, epistemologically prior and maybe even more worrisome, than the destination she is trying to escape *to*.

As a further suggestion, it might be that Plato's cave allegory provides a more adequate analogy to MMORPG's than Nozick's machine. The gamer's route back to reality, just like the characters' in the cave, is not blocked *ex hypothesi* and remains available to her, through effort or accident. One of the important differences though, pointing back to the problem of escapism, is that gamers are voluntary, or indeed eager prisoners, unlike their speluncean counterparts.

Tavinor highlights another difference between playing an MMORPG and being plugged into an MMORPG's world: "If these games provide a version of Nozick's machine, it is one in which the moral nature of the

world is almost the opposite envisaged by Nozick: life is nasty, brutish, and short (it is a puzzle then, why players choose to play in these worlds!)" (2017, 100). This is related to the subjective sense of safety the player would have in these two scenarios. The fantasy worlds of MMORPGs would be horrific if they were actual real worlds - realms of perpetual conflict where the possibility of death and torture is always around the corner. The experience of being a heroic soldier involves much more trauma than the experience of being a successful and famous writer. The whole selling point of violent video games (and MMORPG's by extension) is the caricaturization of violence to the point where it feels non-threatening to the player. Violence in the EM, given the standard reading of the experiment, would have to completely resemble that in real life. While we have not found any empirical studies to prove this, we can safely assume that no one plays video games to experience actual world violence with all its very real and painful consequences. Even the most decorated and heroic fighter has seen her share of wounds and fallen comrades.

Could future MMORPG's become EMs? We can imagine a scenario in which the two conditions we argued for were almost met. Maybe the player will be in a coma-like induced state, fed through tubes and perfusions, with all receptors for pain, cold etc, as well as her previous memories, chemically blocked. The brain would only be stimulated, such that the only reality accessible for her would be the magical and amazing world of the game. Would that qualify as a close-enough approximation of the EM? One way to counter the objection is to address its feasibility. No technology, no matter how intensely tested, is 100% proof against hardware failure or software bugs. Even in such a case, the immunity with respect to non-machine generated stimuli is not guaranteed and complete. But a more philosophically interesting answer would point to the fact that it would not be the MMORPG playing the role of EMs in such a scenario, but the entire setup. Worse, the device takes away the main source of enjoyment in games. Taylor (2007, 71) is right to say that people sign onto MMORPG's "specifically for pleasure". But we sometimes tend to forget that it is the pleasure of actively *playing* the game, together with others, not of being sucked in as mere passive receptors of an elaborate illusion.

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