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Possible Worlds, Virtual Worlds

The affinity between the imaginary employed in possible worlds and cyberculture is so obvious that it has barely attracted scholars' interest until recently. Several of them (Caïra 2007, 2011; Besson 2015), well-known specialists of online gaming, have explicitly rejected adopting a logical or ontological perspective in favor of a pragmatic, sociological approach or one inspired by cultural studies. When a point of view inspired by literary studies is adopted to treat digital artifacts, it is chiefly narratology that is called upon to examine, for example, whether the sources of narrative tension were also at work in video games.¹ When thematics developed in the framework of studies into fictionality were used to look at synthetic game environments (Juul 2011; Ryan ed. 2014), often in comparison with other literary, theatrical or film media (character vs. avatar, immersion vs. interaction),² they did not specifically take up the question of possible worlds.

However, the proximity of the virtual and the possible (however these terms are understood) is intuitive. The pyramid imagined by Leibniz in Theodore's dream sets in motion an intermedial apparatus,³ that shares qualities of both the theater and the library that nowadays we tend to spontaneously understand in terms of a tactile screen,

¹ Among the most recent contributions on this question, see in particular, Walsh, 2011, Caracciolo 2015.

² On this point see especially Ryan 1994, Chaouli, 2005, Caracciolo, 2015, Caïra, 2016.

³ "Thereupon the Goddess led Theodorus into one of the halls of the palace: when he was within, it was no longer a hall, it was a world,

Solemne suum, sua sidera norat.

At the command of Pallas there came within view Dodona with the temple of Jupiter, and Sextus issuing thence; he could be heard saying that he would obey the God. And lo! he goes to a city lying between two seas, resembling Corinth. He buys there a small garden; cultivating it, he finds a treasure; he becomes a rich man, enjoying affection and esteem; he dies at a great age, beloved of the whole city. Theodorus saw the whole life of Sextus as at one glance, and as in a stage presentation. There was a great volume of writings in this hall: Theodorus could not refrain from asking what that meant. It is the history of this world which we are now visiting, the Goddess told him; it is the book of its fates. You have seen a number on the forehead of Sextus. Look in this book for the place which it indicates. Theodorus looked for it, and found there the history of Sextus in a form more ample than the outline he had seen. Put your finger on any line you please, Pallas said to him, and you will see represented actually in all its detail that which the line broadly indicates. He obeyed, and he saw coming into view all the characteristics of a portion of the life of that Sextus. They passed into another hall, and lo! another world, another Sextus. who, issuing from the temple, and having resolved to obey Jupiter, goes to Thrace. There he marries the daughter of the king, who had no other children; he succeeds him, and he is adored by his subjects. They went into other rooms, and always they saw new scenes." (Leibniz, *Theodicy* §415 (trans E. M. Huggard, ed. Austin Farrar [La Salle, Illinois Open Court, 1996], pp. 213-214,

interaction, hypertext, so much does the unrepresentable multiplicity of the versions, the moving back and forth between a restricted or expanded representation of how things are, the numbering of Sextus's counterparts, all point to a digital environment. As anachronistic as this amalgamation might be, it seems to fulfil the potential of a theory and the imaginary associated with it.

Moreover, the centrality of the notion of a world in cyberculture is such that certain scholars prefer that terms like 'world,' and 'universe,' which in their opinion are only being used metaphorically and abusively in literary theory, be reserved for digital artifacts (Caïra 2011). One does not have to be an aficionado of video games to know the founding role Tolkien's work played in them, providing the species, maps, geography and history of an exceptionally rich imaginary country. It is also well known to what extent the idea of creating, journeying through worlds, passing from world to the other, notions of space and habitat, are crucial to the visualization, development and use of digital artifacts. The very name of the persistent universe that has ultimately proved itself the most durable (together with *World of Warcraft* in the category of video games), "Second Life," suggests the project of offering an alternative existence to all those who walk their flying avatar around in it (that is at the time of writing about a million people). Finally, the cosmological imaginary is consubstantial with the digital medium: every user of an Apple product has a galaxy on their start-up screen.

Does bringing them together not risk, then, being too obvious to be conceptualized? Although the algorithms necessary for the visualization of these pixelated worlds are invisible, and are beyond the competence of the users, "building a world" has a very literal meaning in a synthetic environment. In these conditions, is not the somewhat ponderous apparatus of possible world theory superfluous? And then, what would a possible world be like, when it is a question of synthetic environments? Would it be a game area presented as a world, with its towns, its flora and fauna, its inhabitants, its laws? Or instead just a game? Would it rather not be each possible development of the game that would be associated with the choice of a player? Should we not, rather, consider cyberspace in general as a possible world, inhabited by pixelated

creatures? We will be examining only the first option (every world is a game), without forgetting that its ontology is strongly conditioned by the fact that it belongs to digital media.

The difficulty is increased by the fact that “possibility” can have very different meanings. It is sorely tempting to restrict the “possible” to the Aristotelian meaning of the term: the “possible” is whatever can be produced by virtue of antecedents, laws of causality and obedience to the laws of physics in a given world. It should be remembered that from a logical point of view, the “world” is only an abstraction and “possibility” an accessibility relation, a relational notion between possible worlds and a referential world (Kripke 1963) or one between possible worlds and each other. A possible world is a set of propositions assigned modal, consistent, maximal and complete values.⁴

In the literary domain, a possible world (which is not necessarily non contradictory {{qui n’est pas forcément non contradictoire}}⁵ is generally understood, in the broadest terms, as an alternative state of things in relation to the referential world, and via which other possible worlds are accessible, whether they are actualized (as variants, versions, adaptations for example) or not: possible developments of the plot, but remaining undeveloped, mental projections of the characters etc. The possible worlds of the actual world and those of fictional worlds do not have quite the same status: an inhabitant of the actual only has a single existence, tethered to the world (setting aside potential post-mortem survivals in supernatural worlds, according to certain belief universes), whereas a fictional character’s different versions of existence are potentially infinite. Another version of the actual world cannot be actualized, whereas in the fictional universe the cohabitation of several impossible states of this world can occur (Woody Allen’s film, *Melissa and Melissa* in 2004 is an example⁶). The real world is surrounded by

⁴ Naturally, the actual world is, for its part, also “possible.” However in the following exposition, I will call “actual world” the real world, and “possible worlds” imaginary constructions (whether realized or not in the form of cultural artifacts), which can be thought of as alternatives or variants of a referential world (the real world or another fictional world).

⁵ For the discussion on this subject, I permit myself to refer to Lavocat 2013.

⁶ We could also cite Haruki Murakami’s *IQ84*, which, like so many other of this author’s novels, depicts a parallel world coexisting on the margins of the real world.

a myriad of non-actualized possible worlds (dreams, hypotheses, all the possibles that never come to be): the only other versions of the real world that exist are, precisely, fictional. On the other hand, literary or cinematic fictions, in their rough drafts, their adaptations, their translations, their sequels are encircled with a multitude of actualized possible worlds. In so far as they are initial worlds surrounded by possible worlds, the real world and traditional fictional worlds have different statuses.

The application of a possible world theory to fictional worlds in literature and film can quite easily demonstrate the ontological characteristics of these worlds. The connection between virtual worlds and possible worlds leads to other difficulties. First, in online game worlds, returning to characters and variants is the rule, if only because in a game, each part is a state of things that is a variant of the preceding one. It is even accurate to say that a video game is less a possible world in relation to the real world than it is a collection of possible worlds drawn from a state of things both fictional (characters, setting, theme) and real (the rules of the game).

But the most fundamental difficulty arises from the ontological status of the virtual. Should we consider virtual worlds to be actualized possible worlds, in a different mode, of course, than literary or cinematic fictions can appear to be possible worlds of the actual world? Whatever the case, this is what the inventors and developers of certain online worlds would have us believe: a great part of the worlds' attraction resides in this supposed ontological status. This is the first question to which this article will try and respond and which will be examined through some of the practices to found in cyberculture and synthetic environments like Second Life. I will then look at the comparison between actual worlds, fictional worlds in literature and film and online worlds from the perspective of modalities (alethic, epistemic, deontological and axiological) and show that these worlds differ radically from the modal point of view. Finally I will ask what the theory of possible worlds might contribute to approaching video games, compared with what it has offered for other media: the main advantage of employing possible worlds theory with online worlds is, perhaps, just to permit us to discern their ontological properties.

I Metaverse MMOG type (like Second Life)⁷: actualized possible worlds?

In the wake of the creation of *Second Life* (2003, henceforth *SL*) numerous online worlds, more or less ephemeral, have been created (Lavocat, 2016: 316). I will nevertheless take *SL* as my example, despite its being dated, given that it is still the best-known game {{le mieux plus connu}}. Although the appearance of the virtual environments and the rules governing the movement and abilities of the different avatars might differ, most of the observations I will be making about *SL* are applicable to the rest of these worlds.

A persistent world like *SL* can be thought of as a possible world in two ways: in a broad sense, depending on affective connotations attached to notions of ‘world’ and ‘possible’ (used strategically by creators and developers of Linden Lab, the proprietary owner of *SL*) and in a somewhat more precise way: this world can be envisaged as a collection of states of things that can be expressed in propositions, susceptible to being analyzed in terms of modalities, by comparison with those governing the real world. *SL* is therefore ‘accessible’ via the real world in the sense that relations can be established between the two worlds conceptually. But ‘access’ to the virtual worlds is generally understood in a far more literal fashion, because it requires specific procedures inherent to interactivity. Access (to another world) is moreover highly thematized: many online worlds and video games (like *Minecraft*) provide for the construction of ‘portals’ that represent and dramatize the passage from one ‘world’ to another. This is clearly the case in “Better Life” with Robbie Dingo (name of the avatar of Bob Wright), one of the machiminas⁸ that contains the CD joined to the official guide for *SL* (Rymaszewski *et al.* 2006). This little promotional film shows a man sitting at a desk, in front of a computer, in a room that is empty except for a scale model of an old airplane, a sort of vintage children's toy. After a few minutes, we see that the man, who looks completely like an

⁷ The term ‘metaverse’ is borrowed from Neal Stephenson, who uses it in his novel *Snow Crash* (1991) to describe persistent virtual universes. Because this definition is so broad (‘persistent’ means an online world that continues to develop independently of interruptions from users’ activities), *SL*, a world without a narrative thread, is more accurately seen as a metaverse of the MMOG type (Massively Multiplayer Online Game) as opposed to MMORPG (Massively Multiplayer Online Role-Playing Game) which [que/qui] are video games [que sont les jeux vidéo].

⁸ Available online (YouTube).

avatar, is in a wheelchair. Illegible numbers scroll by on the screen and end up coming out of the screen to form a gaseous planet, which looks like the earth. The man plunges his head into this spherical mass (which is not without a passing resemblance to Thomas Anderson's dive into the mirror in the *Matrix* in 1999):



The man's literal dive into the planet (which is as explicit a visualization of immersing oneself in a world as one could hope for!) is transformed into the image of this man flying, floating, falling and pirouetting in a cloudy sky. He is wearing a light parachute which, once open, swells above his head into an orange corolla, in harmony with the sunset.



The feet of the man finally land on the ground. At that moment, a rain of stars surrounds the legs of the avatar, suggesting a miracle: this is expressed both in the recovered agility of the handicapped man and in the gentle landing on a magical earth.

There follows for the spectator a return to the initial world to see the man in his wheelchair, asleep on his keyboard. Then the same sequence of fall, flight and landing is repeated. The little film underlines the compensatory dimension of a voyage about which it is suggested that it extends or replaces an airplane ride from a childhood dream. What is more, what is impossible for a man, and even more so a handicapped one,⁹ in the real world is possible in another world: on this globe that bursts out of the computer and which is the counterpart of our real world, taken as a planet *{{en tant que planète}}*. In reality, of course, *SL* does not breach the barrier of the screen (despite the best efforts of those who disguise themselves in real life as their avatars in *SL!*). This metalepsis is precisely the object of desire. In the little film by Robin Wright, the oneiric version of *SL*

⁹ Cameron's film *Avatar* (2007) relies on exactly the same idea, since the hero, Jack Sully, a paraplegic, agrees to infiltrate the Na'vi people in the form of a particularly agile and athletic avatar.

presents the flight of the Robin avatar in a way that it is never presented in fact in *SL* where there is no parachute, and where the avatars do not dart around in the sky. The apparatus {{setup, arrangement/dispositif}} is paradoxical and rather ingenious: the relation AW (Actual World)/VW (Virtual World, *SL*) is represented by a present virtual world, that can be called AVW¹⁰ (Actual Virtual World), the present-world-in-the-fiction, here the fiction in a digital environment (therefore virtual {{dont/donc}} which already belongs to the universe of *SL*: the ‘real’ man is an avatar. Now in AWL, *SL* does not exist: the pixelated planet is the dream of a handicapped man. It must be understood that in life, in AW, the actual world (or according to the user's jargon, *IRL*, ‘in real life’), *SL* is analogous to this dream, or better still, *SL* fulfils this dream—which makes the desire of the user and that of the avatar coincide. It is in this sense that *SL* presents itself, with a suspicious insistence, as an actualized possible world: a world where the avatars would have desires that are ours, and where virtuality and reality would be indiscernible. This, of course, not the case.

The objection will perhaps be made that traditional fictional worlds also present themselves as desirable possible worlds and no less capable of being actualized by the imagination by means of fictional immersion. So what is the difference? A long series of literary characters have been represented in a situation of fictional immersion, from Don Quixote to Thursday Next.¹¹

But a critical attitude and humor are never absent from the story of their adventures. One of the characteristics of *SL*'s promotional *machimina* is its seriousness, not devoid of pathos, which annuls the distance that is created in principle, in traditional fictional worlds, by the metafictional dimension. This bias in favor of naivete is perhaps

¹⁰ This terminology follows that proposed by Marie-Laure Ryan, while adapting it for the virtual worlds.

¹¹ Thursday Next is the heroine of series of novels by Jasper Fforde, who has the power to enter books and interact with the characters. In the first novel of the series, the heroine introduces herself into the *Jane Eyre* world (one that ultimately designates a novel different from the one we are familiar with). She upsets it, and so produces a version in conformity with {{conforme à}} the one we are familiar with from the novel (*Eyre Affair*, 2001). The version produced by Thursday Next is fictionally a possible world of a real world-in-fiction (a world where Rochester would not marry Jane Eyre {{un monde où Rochester n'épouserait par Jane Eyre}}) which does not exist.

inherent to such a new medium. What is more, virtual worlds like *SL*, devoid of plots and characters, are, in contrast to traditional fictional worlds, empty spaces, entirely devoted to the desiring projection of the users (or typists) via the ambiguous alter egos that are the avatars.¹²

Finally, we are concerned here not so much to consider a fictional world as a present-world-for-us, from a subjective point of view, achieved with the imagination, and by means of what Marie-Laure Ryan has called ‘recentering.’ The operation which concerns the virtual world, because it relies on interactivity, is very different. The supposed actualization of this possible world comes from the fact that the avatars and its activities are the product of a series of actions and operations carried out, *IRL*, by the typist. Nothing prevents an imaginary shift in point of view, but it is added to a presence, delegated certainly, but concrete, of the typist in the virtual world. The illusion of the actualization of a desirable possible world thanks to a digital environment relies on the real gestures (executed by the typist). It also largely rests therefore on the enigmatic nature of the avatars (even if it is less and less the more that *digital natives* are dominant amongst the users of video games). The difference there is between an avatar and a character is exactly the one existing between a virtual world and a traditional fictional world. Envisaging these worlds in terms of modalities enables us to measure this divergence.

II Virtual possible worlds measured by modalities

As Lubomir Dolezel (1998) sees it, referring to literature, the manipulation of modalities’ application domains is an essential aesthetic resource for the creation of fictional possible worlds. That is equally true for online worlds. The way modalities play

¹² There is an abundance of literature on this point. The first generation of users naturally tended to dramatize the relation to avatars patterned on the model of absolute identification (Ludlow, 2007). Now people distinguish far more diversified relations to avatars (Meadows, 2008 ; Di Filippo, 2012 ; Georges 2012). The digital natives have a far more ludic and distanced relation to the avatars than their elders (Besson 2015).

out {{Le jeu sur les modalités}} is quite different in online worlds than that entailed in other media. It is nevertheless worth noting that the modification of the domains of the possible and the impossible (which depend on alethic modality) in the digital environment is not without a passing resemblance to the universe of fairy tales. The predominance of the fairy genre in everything related to the digital is evident to any observer, even if realistic and fantastic worlds coexist within *SL* and although the most recent trend in contemporary video games seems to be moving towards realism. The revival of a genre (fantasy) is, not uncoincidentally, paired historically with the emergence of digital media. This coincidence derives in my opinion from the profound affinity in their treatment of modalities (in particular alethic, and to a lesser degree, axiologic).

The application domain of alethic modality in *SL* is indeed both enlarged and restricted in relation to the one it belongs to in the real world. In the first place, it concerns the avatar: if it is understood as an alter ego, a counterpart of its typist (in this regard there are as many debates as there are practices), it is apt to incarnate a change of sex, potentially of species, a rejuvenation, an embellishment: the avatar can survive its typist (if someone else activates it). It is potentially eternal, and will be as long as the game is in service and if Linden Lab does not cancel his account and existence following an infraction of the (few) rules of the game. His competences are at once more extensive than that of a human being (he can fly) and infinitely more reduced (he is not autonomous).¹³ Aside from the avatars' stereotypical character, the ease and rapidity with which they can act on their environment, construct it, destroy it, furnish it, and people it, recalls the universe of fairy tales. After all, the majority of games require the construction of a habitat: with a couple of demiurgic clicks, as if it were a magic wand, blocks pile up, walls climb, vegetation spreads, mountains rise up, seas dry up. Yet despite a few aesthetic successes, which are often touted, these worlds, being so unstable (because their

¹³ However some people are predicting the coming autonomization of avatars (Geser 2007) and an element of the aleatory perhaps integrated into the behavior of certain avatars (the SIMS beginning with version 3) as an option: if that does not mean any real autonomy of course, an element of the aleatory gives the illusion of it in the eyes of the users.

accelerated construction and destruction follow one another without a pause), are far more incomplete than the real world (in *SL* virtual Paris or Venice only number a few streets). It is true in this regard (it is also a characteristic of novels as Thomas Pavel [1983] has noted) that video games are able to maximize or minimize incompleteness, which has no impact on their success. A game like *Minecraft* offers us a world constituted from an assemblage of cubes, including fauna (limited to sheep and pigs) and flora. The visibly primitive character of this world's components has not stopped it from reaching a total of about one million users. In contrast, *Arma 3 Altis Life*, takes place in a realistic locale, a homologue of the island of Lemnos, whose map, streets, houses, and the less-known spots {{les moins endroits}}, all photographed {{photographié}}, make up the environment (several internet users, who post their games, their 'mode,' for educational purposes, emphasize that this realism is something that attracts them to the game). This does not affect, even in this kind of environment, the ease with which one can procure money and arms (because the game revolves around confrontation of 'civilians,' criminals, terrorists and the police) having the quality of magic.

If the modification of the application domain of alethic modality is inherent to all virtual ludic universes, involving principally the elimination of certain material and physical constraints, the modification concerning epistemic modality is no less crucial. Access to ludic virtual worlds requires knowledge and know-how. These determine, to be sure {{certes}}, the acquisition of points through the accomplishment of a task (in general killing the monster) when it is a question of video games; when it is a question of online worlds such as *SL*, they determine the appearance of the avatar, its ability to act, its recognition by other avatars, its sociability: in a word, the enjoyment of the virtual world. The user can potentially palliate his insufficiencies by paying in Linden dollars (these bought with a money in circulation *IRL*) for the acquisition of objects or competences that he cannot obtain by his own means.¹⁴ it might be said that this is no different from

¹⁴ There exist sweatshops in China (but also in Rumania, Indonesia, Tijuana) where 'goldfarmers,' playing twelve hours a day, trade avatars whose appearance and performance they have improved, with virtual arms or rare objects {{des armes virtuelles, ou des objets rares}} (Pfeiffer, Wang et Beau, in Beau éd, 2007 : 210-213.

the real world. But the resemblance is deceptive: in a video game killing a monster, constructing a house, making clothes are nothing but the superficial application of one and the same competence, the same for all the activities in all virtual worlds, which is the mastery of the computer technology and interface. Certainly, foresight, motor and cognitive agility, a sense of organization, and many other qualities are mobilized depending on the game, whether it is one of combat, strategy or life simulation (those who want to integrate video games with pedagogy insist on the innumerable cognitive benefits furnished by these games). But the primordial quality required, the one that conditioned the possibility of access, in the literal sense of the word, to the world, the one that makes money, the one that is taught, the one that creates a gulf between the generations and sexes,¹⁵ the one that, all things considered, makes it impossible to assimilate digital artifacts with any other artistic or cultural product, is computer competence. Doubtless this is even more evident for the universes (like *SL*) that are not organized primarily as competitive games.¹⁶ It could therefore be said that the concentration of the epistemic modality domain on this issue (computer competence)¹⁷ and its central character have a defining character for virtual worlds.

What about the two other modalities, the axiological and deontic?

The application domain of deontic modality (what is permitted and forbidden) is totally different depending on we are speaking of an online universe, like *SL*, or video games, strictly speaking. They must therefore be dealt with separately.

¹⁵ There has been an unending stream of articles in the media proclaiming the disappearance of the gulf separating boys and girls with respect to video games (for example *The Guardian* 18 Sept 2013, “52% of gamers are women—but the industry doesn’t know it,” by Meg Jayanth; CNN 11 Augur 2013: Nearly half of all video gamers are women,” by Larry Frum). However, all you have to do is walk around a video game convention hall (for example the Paris Games Week in 2016) to confirm the overwhelming majority of boys making up the attendees and youtubers.

¹⁶ A term borrowed from Roger Caillois (1967).

¹⁷ It is often said that people learn a lot from games, especially in the area of history (Caïra and Larré eds. 2009). Weighty volumes and maps provide the information players need and it is not always fictional. But on the other hand it is always subordinate to the game itself whose goal is pleasure and not learning, even if the promoters of ‘serious games’ say the contrary.

A charter has been written for *SL* ('Community Standards'), which defines an application domain for the rules. Juridically, entering *SL* implies a contractual acceptance of an association's rules. Those stipulated by the Linden Lab company are five in number: 1) Tolerance, 2) Non-harassment 3) Non-aggression (we are therefore absolutely not in a competitive game), 4) Protection of private life (it is forbidden to divulge any information about the typists *IRL*), 5) Adult Regions and groups 6) Peace (it is forbidden to interfere with the normal functioning of the game, by pirating the server for example). The first three rules, which concern relations to other people are common to the real world as well as the virtual world, with the exception, a significant one, of sanctions: insulting, humiliating, raping, torturing, threatening an avatar will only entail at the worst the suspension of the avatar's trouble-maker typist's account. Not one single person has ever gone to prison for having murdered avatars with their interposed avatar. So we are only dealing here with a partial homology. Rules 4, 5 and 6 are specific to the virtual world. The fourth and fifth rules aim at providing it with a form of autonomy: the fourth aims at preventing interference from information referring to the real world; the fifth territorializes the application domain of the rules implicitly in force in the real world: dividing the *SL* universe into sectors ('general,' 'moderate,' 'adult') is equivalent to measuring permissiveness as a function of the representation of sexual acts {{en matière de représentations d'actes sexuels}}: moreover there are an enormous amount of reserved spaces in the 'general' domain of *SL*, private properties surrounded by an invisible barrier at which unwelcome avatars are abruptly halted. In the 'Adult' part or in reserved spaces, the avatars (if their typists of course have purchased the necessary competences and attributes!) can participate in activities that are difficult or impossible to do *IRL*. Whether the typist is a minor, which is hard to verify, whether he is an adult but his avatar has a child-like appearance, pedophilia is nevertheless prohibited,¹⁸ as is slavery; however it is difficult for the company to prevent anyone from receiving money, *IRL*, for freeing his avatar from a slave-master avatar! *SL*, like other virtual worlds, is a permissive world and in fact one with a high level of criminality: because controls are non-existent and

¹⁸ As for virtual pedopornography, I permit myself to refer to Lavocat, 2016, II, 3, pp. 297-302.

sanctions are virtual for their part too, but also because criminal practices not covered by the charter are rampant in it: blackmail, extortion of money, money laundering (Cornelius and Hermann, eds. 2011; Castronova, 2005; Pfeffer, Wang and Beau, in Beau ed. 2007: 198-220).

That is the least contradiction in this universe from the deontic point of view. In fact, the essential paradox comes from the status of the body. Even if much has been written on this subject, how to define an avatar and above all the relation linking it to its typist, remains extremely unstable.¹⁹ It is easily understood that the extreme permissiveness that reigns in *SL*, at least from the point of view of representing sex, comes from the fact that the avatars are nothing but an assemblage of pixels and a few lines of code. But if the system was logically consistent, there would not then be any difficulty in physically mistreating another avatar, which the charter explicitly forbids. However, the charter relies on the idea according to which the typist supposedly enjoys a relation with his avatar that involves his subjectivity: if not, it would not be forbidden to insult another one. Other difficulties arise, of course, all of which refer back to the difficulty of working out the status of the virtual world. A marriage in *SL* (of which there are many) has no validity of any kind, and a user will never be found guilty of bigamy because he has a real wife and one or several virtual wives: that obviously has not stopped the female or male companion of the typist, *IRL*, from considering this virtual relationship as cause for litigation. But what is the case, then, for the multiple referential enclaves that exist in *SL*? A grade given to a female student in the form of an avatar in one of the numerous universes that have an annex in *SL* will be valid, unlike a marriage contracted in Pixel City Hall. It is also fair to suppose that the female or male students who, in the form of an avatar, would insult the professorial avatar could be punished *IRL*. Moreover, if a lot of money circulates in online worlds, the status of virtual goods fluctuates: it is difficult to file a complaint, *IRL*, for the theft of virtual goods (although it

¹⁹ A good example is the early case (1993) of a delinquent avatar, Mr. Bungle (who lashed out at {{committed the physical integrity of female avatars)

does happen).²⁰ If Linden Lab accidentally or intentionally, destroyed an existence or virtual possessions, even if acquired at great expense, no recourse would be possible against the company (Castronova 2005).

From the deontic point of view, the world of video games is much more coherent than that of the metaverse of the MMOG type (*SL*). A relation of identification to the avatars, the characters of the game, the multiple 'lives,' is not expected, and for *digital native* players, sentimentality, in this regard, is not called for. Charters of good conduct regulating sociability in the heart of the virtual community (not without contradiction) are replaced by the rules of the game, which function less as conventions (that one might potentially infringe) than as laws of nature that govern the world and that one is forced to accept to gain entrance. This fundamental characteristic suffices to make, as Juul has so aptly remarked, the modalities of video games (this is even truer for massively multiplayer video games, MMORPGs) completely different in relation to those, both, of MMOGs and novels.

Nor is the axiological system the same either in the persistent online worlds and the MMORPGs. It is different, too, in relation to the system organizing moral values that reigns in the real world, fairy tales and novels (even if it would be risky to treat 'novels' as a unified world from the axiological point of view).

In a world like *SL*, the deontic system and the axiological system are linked. To be aggressive in words as in acts is evaluated negatively from a moral point of view, which governs the first three articles of the charter. For the rest, the world of *SL* is indifferent to deviant behavior, which can be translated in terms of liberal morality. This is obvious, since a myriad of micro-worlds exist in *SL*, and nothing prevents a community imposing its rules and its morality in its territory. But on the level of the microworld, the application domain for axiological modality is reduced and focalized on one aspect alone (the relation to another person). We have already noted a comparable limitation

²⁰ There are recent cases however where the theft of virtual objects has been punished either by ordering the restitution of the objects or by a fine (Meiller: 221 -225 and Gensollen: 229-244 in Beau ed., 2007).

concerning epistemic modality, practically reduced to computer competence. The rules of a world like *SL* still depend on the rules in force in the real world, even if only a very reduced and simplified part of the normative system of (western)²¹ societies {{ des systèmes normatif des sociétés}} is retained. In the case of video games, independence with regard to the norms and the laws of the real world is much greater. It is not total however, especially if we take into account current debates and the widely accepted opinion according to which video games promote a taste for violence and immorality. If a game distributor declares, the day after an attack, that it will suspend its ad campaign for the sake of ‘decency,’ it is because it has become cognizant of the supposed porousness between the virtual world and reality.²² It could be objected that this accusation has been made about every fictional universe, whatever their medium. However, in this debate the particular nature of the games from the modal point of view has never been taken into account. Indeed, from the axiological point of view, a game is characterized by its neutrality. This is not exclusive to MMORPGs. Someone playing a naval battle never asks themselves whether it is good or bad to sink a ship. In games of Cops and Robbers and Cowboys and Indians, it would never occur to anyone to make the children aware of the immorality of identifying with one role or the other. In a game of checkers or chess, the fact that White or Black wins has no importance on the political or moral level. For most users²³ the same applies for video games. Even if certain users complain about what they call the ‘Manichaeism’ of the games, that stems according to them from the fact that their avatar must eternally kill the dragon. No-one seriously thinks that it is the incarnation of evil, or that eliminating it, beyond the fact that you earn points that way, confers any extra ethical benefit.

²¹ Users of *SL* like the enthusiasts of MMORPGs are in the great majority American, European and Asian (Japan, China).

²² This was the case after the terrorist attack on 13 Nov 2015. The launch campaign of Ubisoft’s *Rainbow Six Siege* (France) and Activision’s *Call of Duty: Black Ops III* (US) were postponed.

²³ As a young woman player pointed out (heard at the Paris Games Week in 2016): “In *Arma 3*, you have the choice of being either a policeman or a rebel; everyone wants to be a rebel because it is more exciting to play {{plus à jouer}}. It is not like a novel where you always want to be on the good side.

But video games are often mixed universes. In so far as they are possible worlds, their status is ambivalent: they are both games, and most of the time, fictions having traits in common with traditional literary or cinematic fictions. Now fictions, to use Thomas Pavel's apt definition (2003), are "worlds of norms and goods" {{reference "Mondes possibles, normes et biens" "« Univers de fiction : un parcours personnel »?}}. From an axiological point of view, the modal system pertaining to games comes into conflict therefore with that of fiction (as an operator of empathy). It is doubtless in this composite, in the eyes of these games' detractors, that their particular danger resides: the moral qualities inherent in fiction (especially literary and cinematic) risk being neutralized by games. In an interesting fashion, because the same thing was said about the novel, realism is thought to be an aggravating factor.

A game like *Arma III Altis life* takes place in a very realistic setting: the completeness of this possible world has been maximized, since almost all the houses and streets of the two real islands, Lemnos and Agios Efstratios, are reproduced in a photographic form in the virtual universe. Now the game encourages, on the part of certain players, frequent clarifications. In the sequence "Taking hostages," available on YouTube, the player reminds us on numerous occasions not to take the game "to the first degree," as if he felt the need to remind us that in the real world he was not a robber or a terrorist (another sequence, also available on YouTube, is called "suicide vest").

This explicit distancing on the part of a player who is about to share his ludic exploits with a very large audience, reveals an embarrassment, which to my knowledge, has never been expressed by players of *World of Warcraft*, for example. In this game, massively multiplayer, the inventors have cunningly weighted the advantages of the Horde and the Alliance so that there is not too great an imbalance between the opposing forces on the battlefield. Axiological neutrality is a condition of playability. But how does this work in the many games based on history, in particular those which, instead of the Horde and the Alliance, have the Allies and the Axis forces battling it out?²⁴ The game

²⁴ See the excellent clarification on this subject by Caïra in Caïra and Larré, 2007: 5-8.

Arma III (in the version released in 2013), opposes NATO at the end of its mandate and groups of guerrillas, former allies who are seeking to overthrow the government in power while fighting the American occupier. Even though slightly displaced temporally and spatially (the action unfurls in 2053 on some islands in the Mediterranean) an oblique reference to current wars is easily read into it. In such a case, is axiological neutrality possible? Is it desirable? It can be seen that the problem raised by the reference to the real world is, to a certain degree, the same for a video game as it is for a traditional fiction: it is clearly reference that defines, in a great number of cases, the threshold of acceptability for a cultural artifact. But the difference is, once again, that the fiction is combined with a game. So the question is not so much, as it is in literary or cinematic fiction, that of the favorable presentation of a morally reprehensible individual or party, nor even, perhaps, of the player's possible identification with these negative models. It centers rather on the possible and even necessary neutralization of moral evaluations required in order to play.

This modal specificity of possible worlds constituted by video games can be perceived, too, when empathy is the issue. In principle it is not one of the competences required in competitive games. If a combat hero must confront the most ordeals possible, and react with the greatest rapidity possible to achieve his goal, it is not conceivable that he feel any compassion or feel sympathy for the enemies he encounters on his way. Yet empathy, an essential resource in fiction, has an appeal that certain ludic worlds would like to harness. So as not to slow the hero down or tire the player some games consign the altruistic attitude to secondary characters, companions or auxiliaries, doctors for example, who can stand at the hero's side; it also happens, less and less rarely, that the decision to act altruistically on the part of the hero is rewarded by extra points. But if it is a matter of earning a reward, can we properly speak of a moral action, from the moment that it is never totally disinterested? Advocates of serious games (for example Krebs 2013) argue that certain games (like *Heavy Rain*²⁵ in 2010, *Catch 22*, in 2012), confront the players with sophisticated moral dilemmas that exercise their critical faculties and their

²⁵ This game, it is true, highlights this dimension, with this catchphrase: "Make choices. Face the consequences."

ability for moral reasoning. Still, one can question whether ethical conflict is what really constitutes the most powerful attraction of these games.

However, there do exist certain games, which are, it is rather significant to note moreover, conceived in order to attract feminine users (more sensitive, or supposed to be, to ethical questions) where the rules of the game coincide with a morally positive attitude, inclined to care, 'care' [in English]. This is the case when it is a matter of developing a community in a given environment. But here again are we really dealing with moral issues? A certain number of SIMS players, instead of making the community they are responsible for prosper, divert the game from its aims, and seek on the contrary to destroy their avatar family as fast as possible (Suler and Phillips 1998, Meadow 2008). Should we consider it immoral to exterminate an SIMS family? Is it any more or less so than for a child who drowns her doll or for an author who kills their character? If exterminating a SIMS family is not immoral, it would be difficult to consider that a symmetrical action in the opposite direction, making your avatars prosper, is an authentically moral action. However, Japanese parents who since 1996 have given their children Tamagotchi (virtual pets) considered no doubt that the care shown to a pixelated creature was conducive to the development of their moral and social qualities, and offered an educational bonus. To let your virtual horse die from neglect is certainly not praiseworthy and elicits perhaps a feeling of guilt. However, as the development of virtual animals has progressed considerably and people can now raise penguins, earthworms, dinosaurs and virtual dragons, the young breeders probably became indifferent to them, just as happened with the video game avatars. The saliency of the axiological modality in the different categories of video games, despite significant modal differences, is decidedly weak.

The ontological status of digital worlds is conditioned by virtuality. The modal characteristics of different sorts of games stem from this. Virtuality, which can be defined as a modality of presence deprived of corporality and conditioned by interaction, programs an extension of the domain of the possible, a concentration of that of knowledge, a specialization of that of rules, and an extreme reduction of that of ethics. Of

course it is the absence of body and matter that explains this dissymmetry between the enlargement of the domain of the possible and the reduction of that of morality: occurring differently according to the nature of the worlds and games, it leads necessarily to a permissiveness in the matter of representing sex, tolerance or indifference with regard to the elimination of avatars, and even, reticence as to the justice of inquiring about infractions concerning virtual property, and punishing its theft or illegal sale.

We might ask why a work of literary or cinematic fiction, whose characters are certainly no more physically present (if not in the theater) than the avatars in a digital environment excite to a far greater degree cognitive reactions tied to emotion and moral judgments {{evaluations}} (it is well known these two aspects are connected cognitively). One reason for this is that fictions, at least those influenced by novels, construct cases and situations that are interesting from the point of view of ethical choices, which is not essentially the goal of online worlds and rarely of video games. Video games often take place (although the current tendency favors realism) in fantasy universes: dragons and elves are less likely to arouse empathy than more anthropomorphic creatures. What is more, the reader's imagination bestows on a paper creature the full range of human attributes (not to mention characters in films or theater who are human beings, represented or in the flesh), whereas a pixelated entity is demonstrably incomplete: it has to be given competences, attributes, even organs, purchased or won in the game. If none of these characteristics absolutely prevent there being an emotional relation to the artifact, they do not encourage it. Finally and above all, the more important the ludic dimension is, the more the modal, deontic and axiological becomes autonomous in relation to the real world; the more the deontological dimension, assimilable the rules of the game, neutralizes the axiological dimension. That is why fiction (fiction being understood here as anything inducing immersion and empathy in artifacts produced by the imagination) and games, so often combined, establish completely different and in many respects incompatible possible worlds: it is the examination of video games as possible worlds that permits us to demonstrate it.

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