

# Of Human and Posthuman – Videogames and the future of the Human

Leonardo Marcato

Università Ca' Foscari di Venezia

## Introduction

Videogames are a fundamental part of contemporary society, be them traditional PC or console videogames or widespread mobile games, that everyone can play in every moment. Personally, I've been playing PC videogames since my earliest age. I remember fondly my first PC: I used it to make research, to prepare my first school homework, to doodle with Paint. Years later we were one of the first families to have an internet connection in our block, and that time's juvenile frequentations (I dare not call them truly "friends") were often in our house to hear the chirp and scratches of those early modems before venturing forth in what was then an almost unexplored land of bytes and 56k loading times. These are, I believe, memories shared with some difference between all those then-kids and now adults that can call themselves "digital natives". But what I think really started my interest in this world of digital-rendered Human knowledge was the awarded Cyan's 1993 videogame *Myst*. In this game, a first-person graphic adventure, the player is left in a world where story and narrative are silent, in favour of exploration and reading. Riddles and books are the key, here, to proceed through the game. It is a deeply *immersive experience*: it is like being in a moving painting made of still images and superimposed QuickTime movies, brought to life thanks to a carefully selected ambient soundtrack. It gave life to a peculiar videogames category that raged for almost a decade – and is considered one of the killer application for the adoption of CD-ROM drives in home personal computers [Miller 2015]. It can be argued that *Myst* embodies the first example of a videogame that presents an experience of *environmental storytelling*, one of the key arguments of this paper, and how *immersion* in a world, rather than in a story, can build knowledge of ourselves and what is around us. It was, and in a certain way still is, a crucial ludic experience that draws its value from all its elements – graphic, music, programming, technological innovation – in order to convey a meaning. The player thus builds a knowledge of the game through the game itself, in every media its intrinsic value is shown and experienced *interactively*.

There were a good number of videogames that tried to follow in *Myst*'s pathway in order to achieve the same impact; but as any form of human expression, the artistic and philosophical potential that videogames is able to muster can be fully conveyed only with an authorial direction. This is something very few games can say to have up to the extent to actually shine in videogaming landscape – and lately it happens more with the so-called "indie" videogames, that is videogames made by independent small developer houses, rather than with the "AAA" videogames backed by big publishers. But while the former usually have their hands tied by market laws and the goal to make a profit and are developed according to a propriety algorithm of market research (EEDAR's *GamePulse* tool) that boasts a high level

of prediction accuracy on reviews and players buying decision [Lopez 2016], the latter have a bigger freedom in their development. It not always is the case, obviously, as very recent cases showed. Nevertheless, even in the case of blockbuster and big budget videogames there are some products, some titles that have a deep potential for a philosophical analysis. One of the starting points of this paper is that this analysis cannot be limited to a formal dimension but must expand in the existential relations of the Human with its surroundings. This will be argued in the Intermission between this paper's two parts, by expanding on one of the core virtues (in a scholastic and theologian sense of the word) of videogames: *interactivity*. This gameplay peculiarity can philosophically be seen as another way to express *interrelation* between the Human and what it inhabits and knows. The act of gaming is a deeply philosophical experience, when consciously done, since it can help those who play in a better understanding of themselves and each other, thanks to the relations that are born during the game [Marcato 2015a].

### ***Overture: Knowledge and videogames***

But what is this *relation* between videogames and knowledge? There can be a wide spectrum of answers to this question. One of the most accepted and widespread is that videogames can have a pedagogical application both on general [Griffiths 2002; Jackson 2008] and specific subjects [Lacasa et al. 2008], by building or reinforcing important skill sets in able-bodied children and among special needs groups. These researches are paramount from a pedagogical point of view, as they can help teachers and educators to use contemporary generations' connection to the digital world in its ludic dimension towards a better teaching. But its importance notwithstanding, the question of what kind of knowledge videogames can provide, how it can help a better understanding of our surroundings, our present, and our future is deeply philosophical and theoretical. Important themes of our contemporaneity are ingrained in videogames, but they are rarely addressed directly. More often than not these elements are used as narrative devices, something through which the story is presented. They rarely are the focus of the stories; but when they are, they prove to be a radical element of gaming experience. Social issues, technological problems, and the myth of our times are constantly present in bytes and frames of a well-made videogame with these issues in mind. They are intrinsically tied to technological evolution – and, in some way, to socio-cultural advancement. To try to see how videogames can provide knowledge is a challenge that this paper wants to address by looking at what videogames, as a peculiar form of both artistic and cultural expression and technological capability of our western and westernized contemporaneity, can say about the problems arising in the transhumanist and posthumanist debate related to the nature of the Human and its relation with advanced technology. It will not take a stand for one side or another, nor it will be explicit in a comparison with other philosophical works on the future of the Human; it will analyse videogames structures both functionally and narratively, trying to clarify some questions on the matter at hand. Nevertheless, it is part of a broader and ongoing research project on New Humanism [Marcato 2015b], on digital cultural heritage [Marcato 2016b], and on the possibility of a philosophical and existential analysis of videogames in relation with the Human.

This paper will argue that there are two ways thanks to which videogames can help to gain a peculiar kind of knowledge on these issues. The first way wants to tackle the problem by looking at what the videogames, thanks to their nature of computer programs, can provide in terms of knowledge of the Information, or that part of the Fourth Revolution that's slowly becoming a subject to which the Human will have to relate: the chance of a new entity, created by us, to which we will have to relate in the not-so-distant future. The second way is a more existential one; rather than focusing on a videogame as a system of laws and rules, it will try to follow the idea of videogames as the peculiar artistic expression of the Fourth Revolution, an idea that will be presented in the intermission. The framework in which this paper is written, then, is not only that of Philosophy of Information, but also on that phenomenological elements of contemporary theoretical philosophy akin to existentialism that can be summarized by the expression “inquiry on the Human in the contemporaneity”, or the question “what does it mean to be Human?” [Marcato 2014; Marcato 2016a, 348-355].

### **Aria: knowledge of today, players in relation with AIs**

The first way videogames can help create knowledge of the evolution of the Human is strictly tied to its nature of, first and foremost, computer programs that strive to create a plausible experience in order to tell a story, provide challenges to the player or just be a ludic entertainment. But videogames can also offer themselves to players as a *system of events*.<sup>1</sup> Complex contemporary AAA games challenge the player, or try to do so, with a constantly refined simulation of “real-life” situations, where the behaviour of a player’s surroundings is evolving in a constant struggle to reach a realistic experience. It has been argued [Gervás et al. 2006] that this refining of AI processes is strictly tied to the narrative: it helps in building a more structured story to be experienced and by presenting well-written and captivating challenges. Nevertheless, relations built between players and AIs are not always tied to the narrative dimension and involve a knowledge build with a constant relation. A good expression to describe this process can then be *relational knowledge* and sees videogames as subject of philosophical inquiry, something to analyse and debate on.

From one side, when a player finds itself in a situation to be solved, more realistic challenges push towards an approach to the game that involves not only the knowledge of its internal working, the gameplay, but also something akin to a “player versus player” experience. There is an important difference between the two approaches: the former is tied to a game’s mechanics and works by learning both gameplay and behaviour patterns of enemies and surroundings, while the latter is more focused on a comprehension of how a Human plays. Sure, there are tactics, schemes, and moves that can be followed; and a deep understanding and learning of how these tactics are implemented can help in defeating a living adversary. This is particularly evident in real-time strategic videogames: Blizzard’s *StarCraft II*, one of the most played strategic games in competitive e-Sports events, requires players to master various tactics in order to win both against AIs [Ontanon et al. 2013] and other players. It is

---

<sup>1</sup> With this broad expression I propose to encompass every aspect in a videogame that stimulates a player to interact with the story, surroundings, NPCs, other players and so on. “System of events” then suggests that there is more than a mere set of rules, coding, and programming in a videogame, and tries to take into account the interaction and subjective experience of the act of playing a videogame as lived by a player.

interesting to note how AI programming tries to merge these two approaches: its developing is more and more not only based on a set of standard evolution of AI towards a successful behaviour (that is, AI that are programmed to win) but also on what can be described as an “assisted teaching” by Human actors in order to maximize player enjoyment. It has been argued [Robertson and Watson 2016] that this is in partial contrast with academic development of AIs, since it is more focused on the game rather than on AIs refining.

From the other side, the possibility to build a captivating experience with the aid of complex situations poses new challenges to game developers. Enemies, environment, events that the player encounter demand more and more computing power both to work as intended and to be graphically rendered. With the limits reached by contemporary hardware, a game’s level of complexity (from a mere software point of view) seems to depend more and more on improving existing technology or inventing new ones. Being ahead of technology in this field means to have more computing power for a game’s software and, then, to offer more exciting challenges to the player, more interesting situations, and an overall sense of realism that help to enhance what a player can learn from a complex environment like a videogame [Bavelier et al. 2012]. When a game starts, players immediately see a relation establishing between themselves and the game’s programming through the avatar in an *immersion* in the game. With this expression some philosophers that study videogames want to underline how a player feels part of a game’s world, taking its avatar’s senses and abilities on itself, transforming it in an extension of its intentional states in the game world [Björk and Holopainen 2005, 206; Calleja 2011; Di Letizia 2014, 200-223]. It can even be argued that such a relation of immersion can become a peculiar form of *presence* [Di Letizia 2014, 296] where the player is situated in a game environment and can act inside it. In games where interaction with other character is not reduced to a set of decisions to make, items to assemble or phrases to say answering to their utterances, the other characters (and the surroundings) are regulated by complex AIs, set of scripts that enacts a convincing, life-like behaviour.

But what does it mean for a player, for a Human, to enter in relation with such agents? It is a question strictly tied to how we know the inner workings of what we think as a machine. A player is faced with an NPC, a non-playing character: if this is the player’s first playthrough, it is very likely that it won’t know exactly what kind of reaction will result to the given input. But if the player had access to its working – maybe with multiple playthrough, or thanks to a shared information with other players thanks to the community - it knows that, according to its programming, it will very likely answer to its input with a pre-coded set of answers. We can see that this knowledge is not granted: it is something acquired via different means but that, when acquired, influences a player’s behaviour in the same way that the knowledge of how a car works in all of its complexity can give us a margin of error in predicting its behaviour in an ideal situation. In a number of games, this means to reach a point where even the hardest challenge can be overcome thanks to study and repetition of AI working, like boss fights in MMORPGS or the whole playstyle of action-RPG and tactical swordplay like Hidetaka Miyazaki’s *Dark Soul* series. It is something that the player must experience and overcome, with more or less punishing moments, but that can ultimately be beaten - otherwise, it won’t be a videogame at all but simply everyday life. Nevertheless, AIs seems to

be more capable than the player towards certain tasks: broader map control, faster action response, and more complex calculus can be performed with a way better results than what a Human can do – and in some cases, as already seen with *StarCraft II*, machine learning earns a spot in the constant struggle towards a perfected AIs. It seems that we can start to speak of an “epistemology of AIs”, as in how an AI gain knowledge of its surroundings, by looking at videogames. Enemies are starting to learn from the player’s action, programming makes the environment change according to the player’s decision, games respond in what seems more realistic than artificial, redefining “uncanny valley’s” limits and proposing videogames as “testing ground” for virtual intelligent systems [Damer 2012]. While a perfect result has not yet been achieved even in the so-called *open world* games, the evolution is there and it poses interesting theoretical questions.

It is highly unlikely that we will ever see a complete form of AI, as in a proper intelligence created by the Human. As Luciano Floridi convincingly pointed out [Floridi 2015] a true AI is very difficult to create, almost impossible, and the true point is to understand how can be structured the relation between the Human and an agent or entity definitely smarter than the Human but never completely fully aware. We are creating entities that learn from us not only because we write their code, but also because they are reaching a state where they look at us and learn to react to our stimuli. AIs and other digital agents are already capable to show partial emotions and affections, in a way that’s still clearly artificial but that is growing to be more and more lifelike [Martinez-Miranda and Aldea 2005]. Under the light of Information Ethics, this can mean that Infosphere is growing a kind of *inforgs* that sees information not as a mere data to process but as a breathing dimension, a living environment, and thus the constant enrichment of information is not only an ethic imperative but can also be an *existential* one for them – whatever that might mean, in the future. While videogaming, a player sees its relation with these kind of *inforgs* build up in a more natural way than it can be experienced by members of the Human that sees them “from the outside”. Youngest generations have daily contact with highly refined AIs in videogames, are constantly challenged by them and learn, through videogames, how to relate with them and overcome their (usually) superior smartness in certain mechanical tasks. I believe a conscious analysis of this dimension is necessary in order to understand other contemporary issues, as for example in drone warfare [Grayson 2014], that popular opinion tie with videogames in a pejorative sense [Cole et al. 2010]. Moreover, the sense of immersion that allows a gamer to feel part of the game’s world can help in imagine how relationship with AIs might develop in the future in a deeper, existential way. Will we treat AIs as NPCs in a constant and pervasive Augmented Reality Game? Or we will have a relation with them more akin to what we established with our pets and other animals, shaking the old anthropocentrism in favour of a new way of perceiving our role in reality? And should technology be able to perfectly replicate deceased people, what would mean to interact with Siddharta, or Caesar, or Montezuma during a game of *Civilization XX*? Recent development of commercial VR devices for ludic purposes, being exactly that kind of new tech invention that videogame industry is seeking, gives a new twist on these challenges. While VR technology is still in its infancy, it already shows a huge potential. A number of games have already been developed and published for the first VR devices, and more are coming - also for high-budget AAA games, like the forthcoming EA DICE’s 2015 *Star Wars: Battlefront* VR missions. We are

already on the verge of living the dreams of cyberpunks' forefathers: a total immersion in a digital world, with freedom of action and real interaction with other users. For now, this "freedom" is limited by hand controllers and rudimental movements in a pre-programmed space, following the rails of what game designers have decided the adventure is going to be. The potential of such technologies, not only in videogames, are undisputed in order to develop a full immersion in a virtual environment. But this is something that's still to come, and that without doubt will have to be subject of further studies.

### ***Intermission: videogames as MIOs***

Before venturing forth in the second way knowledge in videogames can shed a light on the future of the Human, an intermission is needed in order to better understand the focus. In fact, it must be said that while videogames as an expressive form can be subject of a philosophical inquiry, I believe that the most theoretical questions (those that involve the cardinal question of philosophy, "what is the nature of the Human") can be inspired only by those videogames that fulfil the characteristic of a *Multimedia Interactive Opera*, or *MIO*. This expression was first proposed by Marco Accordi Rickards on the pages of Italian gaming journal *Game Republic*, in 2002, and is somehow still carried on by the *Vigamus* Game Museum in Rome. It was created in order to underline a game's artistic value by taking into account all of the elements that compose a videogame: music, artworks, narrative, and programming concurs to form an artefact peculiar of this age. In the Fourth Revolution of Information, the digital dimension is slowly giving birth to a peculiar form of cultural heritage that has immateriality and interrelation as its peculiarity, in the form of *interactivity* between users and the digital media (Marcato 2016b). Videogames, as MIOs, can be seen as the art products peculiar of the Infosphere, where all the media that concurs to them represent the intrinsic virtue and are tied to gameplay: *interactivity* between players and game and the players themselves, its relational virtue. Not merely a form of interactive fiction, as it can be argued (Tavinor 2005), but considered in relation with other works of art, MIOs accepts the three hybrid ways of approaching a videogame. Formal systems, digital expressions, *milieux* of information (Stiegler 2015); all concur to the definition of a particular art piece thanks to the peculiar quality of the *relation* expressed both in *interaction through gameplay* and *interaction between players*, a *system of events* where the substrate of gameplay and narrative experience is deeply woven with players' subjectivities, their desires and existential dimensions. These kind of videogames spur, urge, stimulate the player to reflect on crucial issues; Kevin Levine's 2007 *Bioshock*, for example, mixed a radical innovative gameplay with deep philosophical questions (Zanoli 2011) and can be read as a huge interactive criticism of Ayn Rand's objectivism.

The harmony of the elements that compose an MIO is expressed by the word "Opera": in Italian language, "opera" means "workpiece", "artefact", but it is also that art form made by singers performing a dramatic work of mixed narrative and sound score in a theatrical setting. This play-on-words wants to underline the hybrid nature of the videogame as a work of art, while the "Interactive" is a strengthening of the quality of relation. Is this affirmed ontological status that expands Accordi's original definition of MIO, integrating what phenomenology, existentialism, and philosophy of information can say about videogames.

This definition of videogames as MIOs is not only an operative expression in order to analyse videogames philosophically and theoretically under certain characteristics, but is also a proposal to urge game designers alike to become conscious of what a videogame can be in the panorama of the anthropocene's Fourth Revolution: an art piece proper of the digital age, thanks to the peculiar quality of the already mentioned *existential relation* that plants its roots firmly in the ground of aesthetics but whose trunk and branches are ontological and phenomenological in nature. They are a proper form of artistic production in the digital age and in a digital world, where immateriality, synchronicity, a-locality and relationality are key ontological dimensions (Kim 20019). The most interesting questions arise from those videogames that can be considered as *symbols* according to Raimon Panikkar's thought: mediator elements between subjective perception and logical analysis and a "cloud of unknowing" formed by different stories, traditions, and cultural references. *Symbols* are *pure relation* between meaning, vehicle and subject, impossible to be discerned in its parts without its destruction, fertile in the ontological determination of a τόδε τι as a constant dynamic movement of *interrelations* (Panikkar 2008, 239-274; Marcato 2016a, 69-80). If we accept immateriality as the primary category of digital culture and videogames as one (if not the) peculiar art form of contemporaneity, the intrinsic value of videogames is born from their ability to structure pure relations between players, with the game itself and It can then be said that in certain videogames with a heavy authorial direction narrative and gameplay elements concur to provide a fertile ground for philosophical inquiry towards contemporary social issues (Frasca 2001; Accordi Rickards and Padula 2012). From these *relations*, with partial or total awareness by videogame designers, theoretical considerations can emerge and be structured according to how narration of such issues is presented to players that face them with a pre-set knowledge not only of the game. When playing, players bring with them the sum of all of their experiences, learned statements, critical thinking, and cultural expression. Like when facing a painting or assist a theatrical piece, these enter in contact with issues stated by the videogame in a more or less evident manner. If this contact is made with awareness and an open mental predisposition that is not only limited to the purpose of winning the game or end its narration, critical inquiry can arise and influence the pre-existing set of knowledge.

### **Concertato: knowledge of possible futures, posthumanism and transhumanism in videogames**

Such is the case with *Deus Ex* series and *Sid Meier's Civilization: Beyond Earth*. The problems of the future of the Human is deeply ingrained in these games (albeit from different points of view), and they also embody good examples to be analysed under the light of this paper's argument. Each one of them represent a different approach to videogaming, and each one of them tries to tackle its narrative in a different way. This is not only because they belong to different genres – first-person action RPG the *Deus Ex* series and turn-based strategy 4X videogame in case of *Beyond Earth* – but also because they choose a different approach on how to present their world to players. These worlds are not only large in size and rich in details, but also deal with issues of transhumanism, posthumanism and neohumanism with a peculiar competence, almost to the point of them being the cardinal element around which both gameplay and narrative craft their structures. By experiencing these games, players enjoy a ludic entertainment that is sprinkled with enough elements to provoke

thoughts and inquiries on themes debated during the narrative. They are presented with a series of issues regarding the future of the Human and are invited to reflect on them, to think about them, and to let themselves and their assumptions to be challenged by them. When approached with awareness of their values as philosophical examples and artistic artefacts, they can be examples for the second way to consider the relation between videogames and knowledge. Like a philosophical novel or philosophical movie, then, a videogame can offer core theoretical issues to analysis, discuss and debate on; for this reason, an appropriate expression to describe this second way to gain knowledge from videogames can be *narrative knowledge* – even if in the second example, that of *Beyond Earth* and *environmental storytelling*, narration will be declined in a different way. In this way of considering the relation between knowledge and videogames, these are no longer subject of philosophical inquiry but *source* of philosophical issues.

The expression *narrative knowledge* is then particularly adequate to be used in *Deus Ex* series. These videogames are part of a long saga created originally by Warren Spector, one of the game designers that can be legitimately called authors thanks to the imprint they gave to projects they directed.<sup>2</sup> They develop their stories with *direct narration*: the setting is given, the player interacts with NPCs and the settings through dialogues, intermission scenes, and audio, in a traditional, movie-like way to narrate. The setting is given, the world is clearly stated and the story unfolds in a non-linear way with a definite beginning, multiple paths and multiple endings. There is an authorial direction in the narration, while the player is invited to think about consequences of its action. Players gain knowledge of the deep social and cultural issues in a way akin to that pervading nineteenth century French philosophy: novels like those of Albert Camus or Gabriel Marcel's theatrical pieces expressed in a narrative form philosophical concepts in a way that also those less used to long continental essays or short analytic papers were able to understand and appreciate. Players are guided towards an immersion in the games' narrative, thanks to the captivating story and the refined characters they meet. While different in settings and sometimes even in gameplay (*Deus Ex: Invisible War*, for example, was first person RPG with heavy action influences, while the original *Deus Ex* and its two prequels *Deus Ex: Human Revolution* and *Deus Ex: Mankind Divided* possess a heavier RPG gameplay), this series is pervaded by an attention to issues related to the future of the Human. The first instalment maybe had the least impact of these issues, being focused on a more classic approach to conspiracy theories. In a world ravaged by terrorism, inequalities, an unstoppable pandemic virus, and controlled by megacorporation, the player take the role of JC Denton, one of the first Humans enhanced with nanotechnology instead of a more “classical” version of mechanic augmentations. During the gameplay, the narrative shows a world spinning fast into chaos: only a selected few have access to the antidote to the virus, and the segregation between rich and poor runs rampant. The narrative follows a classic arc that bring the player, through a form of Hero's Journey, to have in its hand the decision capable of bringing Humankind to a brighter future – or to let it be

---

<sup>2</sup> Other videogame authors are John Carmack, Peter Molyneux, Ken Levine, Hideo Kojima, Hidetaka Miyazaki, Sid Meier, Samwise Didier, Hironobu Sakaguchi, Will Wright, Gabe Newell, and Chris Metzen. This is in no way an exhaustive list of game designers that “deserves” the “title” of author; it is just a remainder that even in a blockbuster industry of “AAA games” some names stand out and their influence is felt in all this peculiar cultural artefact production. Even Sean Murray, for good or worse, will be a name well remembered.

controlled by a power-thirsted multimillionaire. During the game JC Denton discovers Helios, an advanced AI that lacks the decision-making skills and intuition that allows it to become fully sentient and self-aware, and that is seeking a Human to merge with. The second instalment expanded on these issues: this game's factions want to exploit the first game's outcomes (narratively canonized in a synthesis of the three possible endings) in order to gain control of the evolution of the Human, and the player's actions once again can decide the outcome. Here, transhumanism and posthumanism are framework for the decision. Narrative can help the player gain knowledge on what will change should it choose, for example, to help the whole Human in reach levels of biomodification and transcend to be a different transhumanist life form; or it can decide to let the Human be annihilated in its intestine wars, thus letting only a selected few with a shared digital consciousness to rise from the ashes and build a posthuman Earth. The prequels wanted to focus on how these issues came to be: both *Human Revolution* and *Mankind Divided*, while keeping faith to the conspiracy theory structure, went on in laying out in front of the player the social issues tied to these question on our future. By living the story of Adam Jensen, a mechanical enhanced Human in a world where being "natural" (that is, without augmentations) is still more commonplace, players experience racism, segregation, and prejudice first-hand. Computing power allowed game designers to create a more lifelike world, with cities full of common citizens, shopkeepers, baristas. Players can relate with prostitutes forced to enhance themselves in order to satisfy clients' fetishes, beggars that cannot afford anymore the drug that allows them to keep the enhancements to be rejected, idealistic millionaires that wants to elevate the whole Human race to another step up the evolution ladder, and remorseless businessmen and businesswomen that seek to exploit citizens. Players even assist to a dialogue between two NPCs where, in a true "wittgensteinian" take on language, they argue on the fact that all racism and prejudice can be tied to the original decision to give the names "enhancements" and "augmentations" to mechanical and biological modifications to the body of the Human, thus giving a mentality already oriented towards an opinion. There is still the final choice between opening the world's eyes on the conspiracies that are guiding its evolution, but I believe the real choice is another one. These latest two instalments of the series build up questions that, while are already answered in the precedent chapters, are deeply enthralling and pertains to philosophy's core interests: what does it mean to be Human? Human enhancement is a helpful technology or gives a selected few the power to dominate others? While the game's narration already has an answer, its gameplay gives the player space to explore the alternatives. Players take knowledge of these issues like in the first games, but with a twist: they can overturn racism, they can react to the prejudices. This is the true choice. Adam Jensen can use his enhancements to silence police brutality and can react violently to natural's outbursts of discrimination – or it can choose to do it diplomatically. The games do not punish the player, but only show it its action's consequences, following the series' symbol and paramount paradigm: Icarus, the man that chose to better himself and risked everything to reach the sun.

Sid Meier took a different path: *Beyond Earth*, being a strategic game, does not have much in terms of narration but it presents a *world*. The only narration predates the game events: with great hubris Human almost destroyed our planet with pollution, wars, and by exhausting its resources. States and private companies built colony spaceships each one according to their

tradition, thus presenting the player a choice of sponsors that goes from American Reclamation Company's specialization in spies and undercover operation to Franco-Iberian culture advancement. The introduction movie shows these characterizations in a deeply moving way, with the corporative building of ARC's spaceship or the blessing of Slavic Federation's seeding vessels by an orthodox priest before take-off. Here, the indirect narration of a *lore* expressed through building, units, and technologies descriptions tells of the Great Mistake, the Seeding, the quest of the Human for a new place to live, where to atone for its past sins - or to repeat them. The term "lore" used by the community of players to describe this peculiar kind of silent narration is here particularly appropriate. It can trace its origin from Old English *lār*, "to learn", to the Old German \**laistjan*, "to follow a track", and up to the Indo-European root *leis-*, "track, furrow"; it is also connected to Latin *delirium*, "madness". To follow this story means to search for the footprints in every corner, to follow the tracks and the ditches in the environment, looking for every little detail that might give a hint to the bigger picture. It means for the player to have an attention to details and to be in a very particular mind-set in order to find meaning. Players can decide to just follow the game mechanics and build cities, create states, and relate to other factions via diplomacy or war; but sometimes the game shows its world thanks to *environmental storytelling*, and here players can make a conscious act to follow these hints toward a better understanding of the game's world. There is no big story, just descriptions and quotes accompanying the player in its chosen civilization's evolution. The player is presented with three branches of possible Human advancement, each one tied to a different victory scenario. Supremacy sees the Human become more and more tied with digital technologies, ultimately merging with them in a synthetic life form where Human flaws have been corrected by computing power and immortality is achieved uploading one's consciousness. Harmony reject the environmental sins of Human's forefathers and welcomes alien life, trying to integrate them in the Human genome to live in harmony and reach the whole Planet's awakening. Purity, on the other hand, tried to correct past's errors by keeping human genome intact and establishing control over technology, without dominance of neither and embracing the idea of the Human as a peculiar being, albeit dynamic. Discovering new technologies peculiar to these ideologies bring a civilization closer to its ideals – or, with the *Rising Tide* expansion, allows a player to adopt hybrid play styles. Every technology discovery or erecting of wonder (particular and unique buildings that give and edge in different areas of a civilization's development and play style) is accompanied by a quotation of one of the sponsors' leader that shed light on a possible outcome of its ideology. This is an important point: there is no *narration* but a *quotation* that helps immersion by the player in the game. Everything else is built by the player during the experience of the game; it is left to the player's imagination to create the story of the Human during the Seeding of a new Planet every new playthrough. *Beyond Earth* let the player build its knowledge of the Human's past, of the various scenarios and the possibilities of the future piece by piece. It is a slow process, that requires player to be patient and listen to the quotes, open the in-game encyclopaedia and read the stories of buildings and units, suspend the game and discuss them with other players in forums and social networks. If experienced with an open mind-set that welcomes stimuli for reflections and considerations, playing the game presents a good number of elements towards the future of the Human. What will be the relation with our environment when we finally accept that anthropocentrism has to be abandoned and rejected? Is integration with technology a road to embark upon or we will

have to keep ourselves in an interrelation<sup>3</sup> with it? The slow pace of a turn-based strategic game allow a player to reflect during the gameplay, much like reading an essay or a paper.

### ***Finale***

This paper tried to present how players build knowledge with videogames on issues related to the future of the Human in two different ways. The first one, *relational knowledge*, see a player interact with a digital system of events, where programming of complex AIs is something similar to what might be experienced in a not so distant future. The focus here is on videogames considered broadly, as elements to be analysed philosophically and “testing grounds” for complex intelligent smart life-like forms that might emerge from the Infosphere as proper *inborgs*. The second way, *narrative knowledge*, sees videogames as source of philosophical issues, much like a philosophical novel or art piece, and accepts videogames as MIOs – *Multimedia Interactive Opera*. Here, transhumanist and posthuman issues are laid on the table with a *direct* (in case of *Deus Ex* series) or *indirect* (in case of *Beyond Earth*) narrative style. Knowledge is gained not differently from reading a philosophical novel or essay, respectively. What is narrated in Deus Ex story and the world on which players build their civilizations in Beyond Earth revolves around issues like our relationship with science and augmentations, the chance of discrimination between augmented and naturals, the decision we have to make in order to survive in a world that has been destroyed by our actions to the point of no return. Nevertheless, there is a question that have to be answered – even if it was already mentioned: why the examples of this paper are not indie games but big-budgeted AAA games?

I believe the question is rather simple, even if debatable: indie games are already aware of the issues detailed in this paper. Their developers are aware of the challenges and potentiality this media, this art form has, they know that videogames can bring forth a number of sociocultural and philosophical issues, but they don't reach enough public. They do not sell like AAA games do, and their voice is – for now – not enough heard to be truly meaningful. Sure, sometime a good indie game comes out and tackle the issues that matters without the need of high-detailed graphic or innovative gameplay, or with a simpler retro style structure. Just think to MidBoss LCC's 2015 *Read Only Memories*, where one of the character is a robot that gained consciousness thanks to an algorithm that tied his awareness to its hardware, thus giving him a “true” form of situated and embodied conscience. It is a deeply and strong philosophical statement, that echoes in the whole game with positive consequences for the much-discussed gender issues. These are indie videogames that have a

---

<sup>3</sup> Raimon Panikkar would have said: “inter-in-dependence”. With this expression, his philosophy designates the peculiar nature of connection and correlation of all separated things in Reality. Everything is in relation with everything else in a way akin to the internal dynamis of the catholic Trinity, where the elements are distinct but not separated, in a free connection that influences everything else (Marcato 2016a, 125-130; Panikkar 2012, 358-359). Expanded to the relation between Human and technology, inter-in-dependence between them means to relate with it (theoretically, philosophically, sociologically, scientifically) with full knowledge that there is no separation between the two actors, that are thus transformed into events of mutual dynamic influence. Every technology we create influences us, and we are influenced by it; it can never be *only* an instrument.

lot to say in the field of transhumanist/posthumanist/neohumanist debate - but they are hardly known to the big public, often only used by academics to prove a point. Contemporary research, no matter the field, find itself in the wearying situation of not being heard anymore – philosophy is not an exception, as the fact that anti-scientism is on the rise and a misguided America actor can move hundreds of thousands of parents on the decision to not vaccinate their child, no matter what Nobel winning medics can say, no matter how much science and reason they can throw around. We face a strong competition with the forms that arose from the digital and are now crucial part in the decision-making processes of a high number of social actors, both collective and individual. We need a mediator between our research and the public, something that can make heard not some theory or philological research on authors, but what is our main goal: critical sensibility. I believe that videogames can be this mediator, not only because of their artistic value (because I'm fully aware that it's an issue that is debatable) but also because they are such a widespread presence in contemporary houses amongst the youngest generations that they have, now, a social and educational role to fulfil. Big publishing companies and software houses must start to be aware of that. I'm not suggesting that they all have to be educational, because they are first and foremost a ludic form of entertainment and only later a social instrument, like not every film is a Bergson statement on life and death. Nor I'm advocating some kind of crusade against the so-called “violence in videogames”, an idea that's so backwards and superficial that has been demolished time and time again. But sometimes, they can say more. They are integral part of our contemporaneity and can be a whole lot more in the future, whatever that might be.

## Games

MYST, Cyan Interactive, 1993.  
STARCRAFT II, Blizzard Entertainment, 2013.  
DARK SOULS, From Software, 2011.  
STAR WARS: BATTLEFRONT, EA DICE, 2015.  
BIOSHOCK, Irrational Games, 2007.  
DEUS EX, Ion Storm, 2000.  
DEUS EX: INVISIBLE WAR, Ion Storm, 2004.  
DEUS EX: HUMAN REVOLUTION, Eidos Montreal, 2011.  
DEUS EX: MANKIND DIVIDED, Eidos Montreal, 2016.  
SID MEYER'S CIVILIZATION: BEYOND EARTH, Firaxis Games, 2014.  
READ ONLY MEMORY, MidBoss LCC, 2015

## References

- Accordi Rickards, Marco and Padula, Alessia. 2012. *Videogiochi e Propaganda*. Roma: UniversItalia.
- Bavelier, Daphne; Green, C. Shawn; Pouget, Alexandre; and Schrater, Paul. 2012. “Brain Plasticity Through the Life Span: Learning to Learn and Action Video Games”. *Annual Review of Neuroscience*, 35:391-416.
- Björk, Staffan and Holopainen, Jussi. 2005. *Patterns in Game Design*. Boston: Charles River Media.

Calleja, Gordon. 2011. "Revising Immersion: A Conceptual Model of the Analysis of Digital Game Involvement". Proceedings of DiGRA 2007 Conference: Situated Play. <http://www.digra.org/wp-content/uploads/digital-library/07312.10496.pdf>. Accessed September 28, 2016.

Cole, Chris; Dobbing, Mary; and Hailwood, Amy. 2010. *Convenient Killing. Armed Drones and the 'Playstation Mentality'*. Oxford: The Fellowship of Reconciliation.

Damer, Bruce. "The Day the Game came Alive: Virtual Worlds and an Origin of Artificial Life". Proceedings of the 2010 IEEE Conference on Computational Intelligence and Games. 18-21 August, Copenhagen (Denmark). <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5593386>. Accessed October 02, 2016.

Di Letizia, Roberto. 2014. *Ludosofia. Cosa la Filosofia ha da dirci sui Videogiochi*. Roma: Universitalia.

Floridi, Luciano. 2015 "Singularitarians, AItheists, and Why the Problem with Artificial Intelligence is H.A.L. (Humanity At Large), not HAL". *APA Newsletter / Philosophy and Computers*, 14(2):8-11.

Frasca, Gonzalo. 2001. "Videogames of the Oppressed: Videogames as a Means for Critical Thinking and Debate". Masters Thesis, Interactive Design and Technology Program, Georgia Institute of Technology. 2001.

Gervás, Pablo; Lönneker-Rodman, Birte; Meister, Jan Christoph; and Peinado, Federico. 2006. "Narrative Models: Narratology Meets Artificial Intelligence". *Towards Computational Models of Literary Analysis* Workshop Proceedings. 22 May, Genoa (Italy); 44-51. <http://lrec-conf.org/proceedings/lrec2006/workshops/W04/Literary%20analysis.pdf>

Grayson, Kyle. 2014. "Drones and Videogames". Culture, Security, Identity – Newcastle University Blog, February 25. <http://www.e-ir.info/2014/02/25/drones-and-video-games/>. Accessed September 28, 2016.

Griffiths, Mark. 2002. "The Educational Benefits of Videogames". *Education and Health*, 20(3):47-51.

Jackson, Janna. 2008. "Game-based teaching: what educators can learn from videogames". *Teaching Education*, 20(3). Accessed October 02, 2016. doi:10.1080/10476210902912533.

Kim, Joo-Han. 2001. "Phenomenology of Digital Being". *Human Studies*, 24(1/2):87-111.

Lacasa, Pilar; Martinez, Rut; Méndez, Laura. 2008. "Developing new literacies using commercial videogames as educational tools". *Linguistic and Education*, 19(2):85-106.

Lopez, Alan. 2016. "How Market Research Changes your Game". Polygon.com, March 2. Accessed October 10, 2016. <http://www.polygon.com/features/2016/3/2/11107742/how-market-research-changes-your-games>.

Marcato, Leonardo. 2014. "Digital Physis. Contemporary challenges for a definition of the Human". Paper presented at the XI International Ontology Congress, "Old question of Physis, contemporary approaches", San Sebastian – Donostia, Spain, October 1-4.

Marcato, Leonardo. 2015a. “Cura e Intercultura. Il gioco di ruolo come Pratica Filosofica di dialogo dialogale”. In *Le radici della scelta. La vocazione per la professione medica*, edited by Laura Candiotti and Luigi Vero Tarca, 191-200. Milano-Udine: Mimesis.

Marcato, Leonardo. 2015b. “Per un “nuovo umanesimo”. Il ruolo della filosofia nel rapporto con le nuove tecnologie tra tecnofobia e postumano”. Paper presented at the International Conference “Il Diritto alla Filosofia. Quale filosofia nel terzo millennio?”, Venezia, Italy, October 19-21.

Marcato, Leonardo. 2016a. “Le radici filosofico-teologiche della proposta di dialogo dialogale di Raimon Panikkar”. PhD diss., Università Ca’ Foscari di Venezia.

Marcato, Leonardo. 2016b. “Culturally Digital, Digitally Cultural. Towards a Digital Cultural Heritage?”. In *Cultural Heritage: Scenarios 2016*, edited by Lauso Zagato and Simona Pinton. Edizioni Ca’ Foscari Digital Publishing (forthcoming).

Miller, Robyn. 2015. “Classic Game Post-mortem: Myst”. Game Developers Conference Vault, April 9. <http://www.gdcvault.com/play/1018048/Classic-Game-Postmortem> (10/06/2016)

Ontanon, Santiago; Synnaeve, Gabriel; Uriarte, Alberto; Richoux, Florian; Churchill, David; Preuss, Mike. 2013. “A Survey of Real-Time Strategy Game AI Research and Competition in StarCraft”. *IEEE Transactions on Computational Intelligence and AI in Games*, 5(4):293-311.

Panikkar, Raimon. 2008. *Opera Omnia*. Vol. IX, “Mistica ed ermeneutica”. Tome 1, “Mito, simbolo, culto”. Milan: Jaca Book.

Panikkar, Raimon. 2012. *Opera Omnia*. Vol. X, “Filosofia e Teologia”. Tome 1, “Il Ritmo dell’Essere. Le Gifford Lectures”. Milan: Jaca Book.

Robertson, Glen and Watson, Ian. 2016. “A Review of Real-Time Strategy Game AI”. *AI Magazine*, 35(4). Accessed October 02, 2016. <http://www.aaai.org/ojs/index.php/aimagazine/article/view/2478>.

Stiegler, Bernard. 2015. *Platone Digitale. Per una filosofia della rete*. Translated by Paolo Vignola and Francesco Vitale. Milano-Udine: Mimesis.

Zanolí, Filippo. 2011. *Bioshock. In nome del padre*. Milano: Unicopli.