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Video games, Art and the Human Condition: An Existentialist Approach to Game Design

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Abstract

Are videogames art? In the past decades, this question has proven to be very controversial and has been studied from several perspectives. Raph Koster stipulates that video games will be recognized as art only when they will offer, like all other forms of artistic expression, a better understanding of ourselves. According to Koster, the artistic legitimacy of video games is contingent upon their ability to represent the human condition. This paper seeks to know to what extent an existentialist approach to game design, inseparable from a reflection on the human condition, can allow us to consider video games as an art form. We rely on the psychological theory proposed by Yalom (May & Yalom, 2013; Yalom, 1980, 2008) who identifies four ultimate existential concerns that are able to drive human behavior: meaning, freedom, death, and intersubjectivity. In the following, we propose and illustrate *Eggxistence*, a video game designed to expose players to different game mechanics that foster reflection upon the human condition and the four ultimate existential concerns. Within this framework, (1) meaning, (2) freedom, (3) death, and (4) intersubjectivity are expressed respectively in the form of (1) procedural rhetoric, (2) emergent gameplay, (3) permadeath, and (4) interactive storytelling. Borrowing insights from the leading designers in the field and examining specific case studies in computer games, this paper explores how an existentialist approach to game design can be put into practice. We focus especially on determining if the game is capable of eliciting reflections about the considered concerns. To the best of our knowledge, this paper is the first to study these four existential concerns conjointly under such a framework.

Key words: art, art form, video games, existentialism, philosophy

Introduction

For over two decades now, a debate has taken place, simultaneously in both the art world and the field of game studies, around the status of computer games as an art form. While several museums have dedicated exhibition space to this new medium (McCormick, 2013; Solon,

2012), some game designers, such as Hideo Kojima, outright reject the concept of games as art (Gibson, 2006).

Many academics have tried to tackle this question. For example, Deen (2011) states that "John Dewey's pragmatic philosophy of art offers a valuable framework for discussing the unique way in which video games may be art"; Gee (2006) thinks that games have all the formal elements expected from art; Schulzke (2009) says that game have a pragmatic value that is the same as art; and Pearce writes that game "have also given rise to a new art genre, one that is being harnessed in much the same way Fluxus art harnessed analog games" (2006: p. 73). With a mixed opinion, Adam (2006) writes that games can be art "but only if the people who create the games, the developers, have the courage and the vision to make it so". Others (Ebert, 2010; Kroll, 2000) think that "game are primarily a form of play [...] and can therefore never be compared to the work of great painters, film directors and writers" (Bourgonjon, Vandermeersche & Rutten, 2017). This debate is all but over.

The definition of what constitutes art is source of disagreement among art theorists, and this discord inevitably fuels the debate surrounding the artistic status of computer games. In the 19th and 20th centuries, Impressionism, Cubism, ready-made art, conceptual art, photography and cinema have all challenged the preconceptions on which art was based. The art classification originally proposed by philosopher Hegel at the beginning of the 19th century only had five major art forms: architecture, sculpture, painting, music and poetry (Hegel, 1875: pp. 19-22). Over the years, new art forms have gradually been added to this classification. Performing arts (theatre, dance, mime and circus), cinema and photography are now considered legitimate art forms. Therefore, we can state that this classification is not immutable; new art forms can emerge.

Raph Koster, a renowned video game designer and theoretician, also questions the artistic legitimacy of the video game medium. He sees art first and foremost as a means of expressing complex information (Koster, 2013).

> "So what is art? My take on it is simple. Media provides information. Entertainment provides comforting, simplistic information. And art provides challenging information, stuff that you have to think about in order to absorb. Art uses a particular medium to communicate within the constraints of that medium, and often what is communicated is thoughts about the medium itself (in other words, a formalist approach to arts—much modern art falls in this category)." (Koster, 2013: p. 148)

Koster's definition emphasizes not only the communicative function of art, but also the necessity for congruence between the content and the form of the artwork. The content corresponds to the information that the artist is trying to communicate. According to Koster,

the level of complexity characterizing the communicated information is a criterion for differentiating art from entertainment. Art, unlike entertainment, challenges our preconceptions and sparks reflection. The form corresponds to all intrinsic qualities of the artistic medium, which makes it unique. Koster emphasizes that the form must serve the content; the artist must make use of the medium's intrinsic qualities to express the information.

Video game is a relatively young medium and its full potential remains to discover. Koster stipulates that video games will be recognized as art only when they will offer us, like all other forms of artistic expression, a better understanding of ourselves.

> "Games thus far have not really worked to extend our understanding of ourselves. Instead, games have primarily been an arena where human behavior—often in its crudest, most primitive form—is put on display. [...] but for games to truly step up to the plate, they need to provide us with insights into ourselves." (Koster, 2013: p. 176)

"For games to reach art, [...] the mechanics must be revelatory of the human condition" (Koster, 2013: p. 185). According to Koster, the artistic legitimacy of video games is contingent upon their ability to represent the human condition.

But what is the "human condition"? The expression is used in a variety of contexts to define very different issues. In this paper, we will employ the definition proposed by the existentialist school of thought, represented by modern philosophers such as Nietzsche, Heidegger and Sartre. A true philosophy of the human condition, existentialism focuses on the individual's struggle with the givens of his own existence. We will rely on the psychological theory proposed by Yalom (May & Yalom, 2013; Yalom, 1980, 2008) who identifies four ultimate existential concerns that are able to drive human behavior: (1) meaning, (2) freedom, (3) death, and (4) intersubjectivity.

Some game theorists have already expressed their ideas on how to transpose these existential givens into video game form. Ian Bogost (2008) worked on the notion of meaning in video games, Warren Spector (2013) wrote about freedom, Jamin Warren (2013) explored death and Chris Crawford (2003) researched intersubjectivity. However, they approached each of these concerns independently.

This paper seeks to explore to what extent an existentialist approach to game design, inseparable from a reflection on the human condition, can allow us to consider video games as an art form.

In the following, we propose and illustrate *Eggxistence*, a video game designed to expose players to different game mechanics that foster reflection upon the human condition and the four ultimate existential concerns. Within this framework, (1) meaning, (2) freedom, (3) death, and (4) intersubjectivity are expressed respectively in the form of (1) procedural rhetoric, (2) emergent gameplay, (3) permadeath, and (4) interactive storytelling. Borrowing insights from the leading designers in the field and examining specific case studies in computer games, this paper details how an existentialist approach to game design can be put into practice. We then analyze the proposed framework and the experience elicited by *Eggxistence*. To the best of our knowledge, this paper is the first to study these four existential concerns conjointly under such a framework.

1. Game design: an existentialist perspective

Existentialism rose in the 19th century as a new and distinct way to do philosophy, challenging traditional philosophies such as rationalism. Existentialists reject the methodological detachment that characterizes the rationalist perspective (Aho, 2014: p. 15) and argue that an understanding of human existence necessarily begin by searching within ourselves. In their view, moods emerge from our existence, that is to say from our active participation with life. Certain moods, such as anxiety, fear and despair, are symptomatic of a deep confrontation with our own human condition (Flynn, 2006: p. 7). Investigating the meaning behind our emotions therefore prompt us to examine the givens that underpin human existence. This concern for the affective experience, shared by artists and existentialists alike, partly explains why existentialism has since its early days been associated with the field of the arts (Flynn, 2006: p. 7).

1.1. Meaning

The existentialist view of meaning

"God is dead," famously proclaimed German philosopher Friedrich Nietzsche (2011, p. 237). Nietzsche was an ardent critic of Christianity. According to him, this system of thought, supposed to give man a meaning to his life and to the world around him, was based on lies, filled with hypocrisies and promoted outdated moral values. However, when he announced the death of God, he was merely observing a social reality: God was no longer at the center of people's thinking. Religion was gradually losing ground in the culture to rationalism and science (Flynn, 2006, p. 40). The eventual dissolution of the religious belief system would leave an immeasurable void. From then onwards, man would have to wander in a meaningless world devoid of any absolute value on which to base his own existence. To combat this imminent nihilism, Nietzsche argued that man would have to carry out a "transvaluation of values" and find a meaning for himself in his existence (Tanner, 2001, p. 188).

Sartre's thought is imbued with a similar atheism. "There is no human nature, since there is no God to conceive it," says Sartre (1946: p. 6). If there is no human nature, this means that no particular essence can be assigned to man. Man cannot be said to be, for example,

inherently good or bad. Sartre reverses Plato's view that essence precedes existence — the intrinsic properties of a thing define what it is — and states that for man, "existence precedes essence" (Sartre, 1946: p. 5). Human beings, unlike objects, cannot be interpreted from an essentialist perspective. Sartre uses the figure of the clipboard to explain what ontologically differentiates the mode of being of objects (being-in-itself) from the one of men (being-for-itself). A paper cutter is an object made by a craftsman, designed according to a specific concept and function. The essence of the paper cutter thus corresponds to "all the recipes and qualities that enable it to be produced and defined" (Sartre, 1946: p. 5). A being-in-itself is lacking consciousness and cannot change its existence because it cannot choose or act. Man on the contrary, has no creator, nature or function. He is what Sartre calls a "being-for-itself"; he is a conscious being who is defined only by his own existence, only by the choices and actions he makes.

Descartes' cogito ("I think, therefore I am") demonstrates that the thinking subject can prove and recognize the existence of his own consciousness (self-consciousness). However, consciousness itself is not an object; it is rather an activity (Aho, 2014: p. 94). Drawing insights from phenomenologist Edmund Husserl, Sartre qualifies consciousness as both an intentional and a meaning-giving activity. Consciousness is always intent towards something. It is through his consciousness that the individual apprehends the world that surrounds him. It is also through his consciousness that he bestows meaning on the world. Consciousness expresses itself in the world through the choices of the individual. "Choice and consciousness are one and the same thing," says Sartre (1943: p. 506).

Procedural rhetoric

Game theorist Ian Bogost (2007) argues that video games constitute both an expressive and persuasive medium, capable of mounting arguments, delivering a message, and influencing players. However, video games communicate very differently from other mediums. They employ a new form of persuasion that Bogost terms "procedural rhetoric." Bogost defines procedural rhetoric as "the art of persuasion through rule-based representations and interactions rather than the use of speech, writing, image, or moving images" (Bogost, 2007, p. ix).

While the term "rhetoric" referred in ancient Greece solely to public speaking for civic purposes, it nowadays refers to any form of effective expression that "achieves the goals of the author and absorbs the reader or the viewer" (Bogost, 2007: p. 19). Contemporary rhetoric is no longer for the sole purpose of persuading or changing the opinion of the interlocutor. Borrowing from the work of rhetoric expert Kenneth Burke (1969), Bogost stresses that rhetoric can be found in any form of symbolic systems. "Wherever there is persuasion, [...] there is rhetoric. And wherever there is meaning, there is persuasion," says Burke (1969: p. 172). Thus, rhetoric can take a visual form, as in painting, or even procedural form, as it is the case in video games.

Bogost states that the rhetoric used in video games is "procedural" based on Janet Murray's (1997) description of procedurality. Murray defines procedurality simply as an "ability to execute a series of rules" (Murray, 1997: p. 71) — a series of rules being a procedure. Since video games are rule-based systems, they are intrinsically a procedural medium. The basic representational mode of video games is procedural: they model behaviors and represent processes by making use of computer processes. Procedural representation is "explaining processes with other processes [...] rather than language" (Bogost, 2007: p. 9).

Video games are distinctly interactive; they allow players to interact with their processes. Bogost puts forth the figure of the enthymeme as the model of interaction of procedural rhetoric. An enthymeme is a syllogism (a logical reasoning composed of two premises and a conclusion) whose major premise is not explicit. The recipient must, from the minor premise and conclusion communicated by the sender, deduce the major premise that is omitted. "A procedural model like a video game could be seen as a system of nested enthymemes, individual procedural claims that the player literally completes though interaction," says Bogost (2007: p. 43). While the recipient must find the premise omitted from an enthymeme by inference, the player must fill the missing part of a procedural enthymeme by interaction. Bogost qualifies this missing part as a "simulation gap." The simulation gap "is the gap between rule-based representation and player subjectivity" (Bogost, 2007: p. 43).

A simulation is a simplified representation of a source system. It does not represent the source system as it really is in all its complexity. The simulation designer prioritizes the elements of the source system he wishes to represent and, in doing so, puts forward his own particular conception of the source system. A simulation cannot be objective. Any simulation is subjective and presents some ideological bias (Bogost, 2006: p. 99). There is thus inevitably a certain disparity between the representation of a source system and the player's conception of the same source system. "The interpretation of a game depends as much if not more on what the simulation excludes or leaves ambiguous than what it includes," Bogost (2006: p. 105) points out. The meaning of the game emerges from the struggle between the author's intention and the player's freedom of interpretation (Bogost, 2006: p. 123). Although the game designer tries to convey a particular meaning through the processes, it is the player who ultimately interprets and confers to the game its meaning.

1.2. Freedom

The existentialist view of freedom

The conception of freedom featured in Sartrean existentialism rest upon an atheistic premise. Man is free because God does not exist. Without God, there can be no theological determinism that determines the present and future actions of man. Man is the master of his own destiny.

Sartre describes freedom as 'absolute' (Aho, 2014: p. 94). Although the individual might sometimes find himself constrained in his actions, he always retains the freedom to define for himself the meaning of his situation. Freedom, in this sense, cannot be taken away. Freedom is an ontological or structural characteristic of the human condition, an existential given (Aho, 2014: p. 86).

Sartre states that "man is condemned to be free" (Sartre, 1946: p. 7). Condemned because he has not chosen to exist and existence entails a commensurate responsibility. Man is responsible for the choices he makes and the consequences of his actions. He is also responsible for his inaction. "I can always choose, but I must know that if I do not choose, that is still a choice" says Sartre (1943: p. 526). Furthermore, individual acts, on Sartre's account, relay a collective responsibility. Man defines himself through his own choices and in so doing, symbolically involves all of humanity. With every choice he makes, he discloses his own normative conception of man (Sartre, 1946: p. 7).

Determinism and freedom in video games

The game designer, by creating a virtual world and defining the rules that govern it, plays a role similar to that of a creator god. Warren Spector (2013) however contest the extent of this role. In his view, the task of the game designer is not to determine the player's end-to-end experience, but rather to establish a framework in which the player can make choices and express his creativity.

According to Spector, video games can be divided into two categories: scripted, linear video games and player-driven games. In scripted, linear games like *The Walking Dead* (2012) and *Heavy Rain* (2010), players must follow a predetermined path and are only offered limited and pre-planned choices. Player-driven games like *Deus Ex* (2000) and *Dishonored* (2012), in contrast, foster the player's creativity and judgment by confronting him to meaningful choices and consequences. Spector, like Sartre, recognizes the exercise of free choice as a meaning-giving activity: "The most interesting games are those that let players devise personally-meaningful goals, formulate and execute plans to achieve their goals" (Spector, 2013). Most interestingly, player-driven games exploit an intrinsic quality of video games: emergence.

Spector summarizes the phenomenon of emergence by making use of this quote from famed American physicist Murray Gell-Mann: "Complex structures or behaviors emerge from systems characterized by simple rules" (Gell-Mann, 1995: p. 99-100). The concept of emergence applies to video games because fundamentally, games are formal systems based upon rules. The player is given a set of rule-based interactions and is then thrown into a world inhabited by entities that follow rule-based behavioral processes. The player can instigate emergence by manipulating the dynamic systems the game contains and in so doing, gives rise to situations the designer could not have predicted. Emergence can also appear independently from the player through interactions entities have with one another in the virtual ecosystem. Games that feature emergent gameplay such as simulation games, open

world games and sandbox games are "engines of perpetual novelty" (Spector, 2013): they give players an experience that feels different and unique every time they play.

1.3. Death

The existentialist view of death

In *Being and Time*, Martin Heidegger (1985) analyzes the relationship between being and death from an ontological point of view (Inwood, 2002: p. 72). Death, in this sense, is not an event in one's life. It is instead, as Heidegger describes it, "an unsurpassable possibility." Death is the first possibility of Being, the possibility that follows him throughout his existence and which is always present. Heidegger describes death as the "possibility of impossibility"; the possibility which annihilates all the possibilities of Being when it is realized. When the individual dies, he no longer exists; he loses all possibility (Inwood, 2002: p. 72). While death is a certainty, it is also indefinite (Inwood, 2002: p. 72); no one exactly knows when they will die. Most importantly, Heidegger characterizes death as a non-relational possibility (Inwood, 2002: p. 72). One may relate to the dying of others, but no one can experience death through the death of another. Death puts an immediate end to all relationships the Being has with others (Inwood, 2002: p. 78).

Heidegger defines Being as being-ahead-of-itself because to exist is above all to project oneself forward (Inwood, 2002: p. 59). It is to consider one's possibilities, to anticipate the consequences of one's choices and to have hopes for the future. Being is temporal, but his time is finite (Inwood, 2002: p. 70). The looming possibility of not-Being discloses itself to the individual as anxiety. Unable to handle this anxiety, many people live in an inauthentic way, attempting to distance themselves from the possibility of death. They consider death as an event far into the future or worse, as a collective phenomenon (Inwood, 2002: p. 70). Engrossed by a socialized and superficial existence that Heidegger calls "everydayness", they never think seriously about their own death. They relinquish to society the responsibility of giving death meaning and in so doing, let others define their existence.

Heidegger believes that to lead a meaningful and authentic life, the individual must accept the inevitability of his own death and try to take advantage of it (Aho, 2014, p. 119). He qualifies this way of being as "being-towards-death". Being-towards-death is aware that death is an ever-present possibility and uses this certainty to constantly question his existence and the choices he makes. Anticipating his own finiteness, he is fully invested in every moment and every decision he makes. Being-towards-death, individualized by anxiety, manages to lift the veil of everydayness and to extricate himself from the collective "They" (Inwood, 2002: p. 70). He recognizes that his life is his own to live. He ceases to live according to others and defines by himself his own existence.

Permadeath

In the virtual world of video games, death takes a form quite different from the one which actually characterizes human existence. Video games give the player not only one life but many lives, as many opportunities to avert death. The capacity to save a game, customary in modern video games, means that the player can always return to a previous state of the game. The saved game thus lessens the significance of the player's actions and renders the threat of death inconsequential. Death is reduced to a mildly frustrating and mostly occasional punishment for the player. In this light, Heidegger would undoubtedly consider video games as another form of "everydayness"; another way to ignore our impending demise.

Although the general trend in video games favors a trivial treatment of death, some games nonetheless stand out as exceptions. Games belonging to the "rogue-like" subgenre feature a game mechanic, commonly called "permadeath," that emulate permanent death. Concretely, permadeath designates any situation where the death of the character controlled by the player is permanent and results in its definitive removal. Permadeath heavily penalizes the player for the mistakes he makes because it is usually accompanied by the loss of the inventory items and experience points amassed by the player with that specific character. The player loses his avatar and therefore all he has achieved in the game. Although permadeath is not commonplace as a game mechanic in video games, it has seen a great resurgence of popularity in recent years. Permadeath is no longer limited to the subgenre of rogue-likes. *DayZ* (2013), a survival game mod for the 2009 tactical shooter game *ARMA 2*, notably helped bring permadeath to new audiences.

Commentator Jamin Warren (2013) put forth that games like *DayZ*, which propose a different experience of death to players, can teach them to live authentically. Actual death, as it is experienced in the real world, is both inescapable and permanent. The individual instinctively feels deep anxiety faced with this certitude. To cope with the anxiety brought about by the awareness of his own death, the individual's most immediate recourse is denial. However, according to existentialist psychotherapist Irvin D. Yalom (as Warren cites), ignoring one's death in the short-term can only result in an increase in death anxiety over time. The only possible solution to death anxiety is to confront one's own mortality. While many artists throughout history have tried to convey the significance of death with their work, video games like *DayZ* allow us to confront our own finitude with an unparalleled intensity. Permadeath constantly remind the player of his own mortality. The player, knowing that he doesn't have any second chance, feels a strong tension similar to death anxiety. It is this tension that makes the video game such an exciting experience. By confronting the player to the finitude of his virtual life, permadeath forces the player to live in the present moment and confers a greater significance to the choices he makes.

1.4. Intersubjectivity

The existentialist view of intersubjectivity

By establishing self-consciousness as the only certainty that can withstand methodic doubt, Descartes creates a dualism that divorces the thinking subject from the world around him (Flynn, 2006: p. 19). Heidegger rejects Cartesian dualism and argues that Being establishes a relationship that is at first practical, not theoretical, with the world (Flynn, 2006: p. 61). Being, in his everydayness, does not contemplate the world with detachment, as the thinking subject Descartes describes. On the contrary, his experience of the world is deeply immersive and committed. Being is so absorbed by his world that he cannot be understood apart from his relation to it. Being and the world together form a "unitary phenomenon" (Heidegger, 1985: p. 62) that Heidegger terms "being-in-the-world." However, the world, in this Heideggerian sense, is not to be understood as a physical space containing a set of objects, but rather as a web of interrelated significance (Inwood, 2002: p. 37). Heidegger characterizes Being both as a "being-in-the-world" and a "being-with." Being is always in relationship with others. Even in solitude, Being remains in relation with others; solitude being nothing more than the absence of others. Being is thrown into a social world that precedes it, already containing a myriad of predefined meanings, values, norms, and practices (Aho, 2014: p. 51). His apprehension of things is therefore always mediated by the sociohistorical context in which he is embedded.

Sartre analyzes intersubjectivity through his conception of a third mode of being: "being-for-others." Being-for-others requires the look of others to define himself but in return, finds himself objectified and alienated. Sartre conceives intersubjective relations as mainly conflictual. "Conflict is the original meaning of being-for-others," says Sartre (1943: p. 404). The solitary individual, through his consciousness, organizes the world around him and gives it meaning. The appearance of others however, upsets the relationship he has with the world. "Suddenly an ob-ject has appeared which has stolen the world from me," says Sartre (1943: p. 295). Others not only perceive the world, they appropriate it. The presence of the other constitutes an "element of disintegration" which destroys the relationship that the individual had previously established with his universe (Sartre, 1943: p. 294).

Once the look of others is placed upon him, the individual suddenly becomes aware of his own presence. "The Other is revealed to me as the subject for which I am an object," says Sartre (1943: p. 392). When an individual perceives another individual, he tries to define him and in doing so, he objectifies him. In this process of mutual objectification, each individual denies the freedom for self-determination the other inherently possesses as a "being-for-itself." Nevertheless, according to Sartre, one can only become aware of who he is through the eyes of others (Aho, 2014: p. 80). An individual cannot define himself as a kind, generous or loyal person, without another first recognizing him as such. The look of others makes possible self-knowledge. "The Other holds a secret—the secret of what I am," says Sartre (1943: p. 404).

Obviously, the perception others have of us is not always right. Our choices and our intentions are often misunderstood. On account of this, the look of others compels the being-

for-others to constantly question the choices he makes. In the play *No Exit* (1944) by Sartre, one of the characters famously declares: "Hell is other people." The individual, subject to the judgment of others, can only live hell when the relations he has with others are contentious. If he cannot break free from the negative perceptions of others, he is condemned to be what others think he is.

Interactive storytelling

Several game designers have expressed their desire to see video games evolve to become, like literature and film, an art form centered on people and relationships. Chris Crawford (2004), most notably, has advocated intersubjectivity in games for many decades now. He believes that video games should be a medium of "interactive storytelling." When asked what interactive storytelling is, Crawford gives a simple answer: "Games about people, not things" (Steele, 2005). His pursuit of interactive storytelling initially sprung from the realization that while all forms of art and entertainment are people-centered, video games are all about things. However, as Crawford points out, it is impossible to tell a story without mentioning people. Stories are first and foremost about people. And in stories, the relationship that exists between people is often conflictual. "Stories portray conflict, usually social conflict," says Crawford (2004: p. 19). Conflict is at the heart of all stories; from the setup to the resolution, it feeds the tension and moves forward the plot. Social conflict more specifically, emerges because people (i.e., characters) have values, interpretations or goals that are contrary.

It's crucial to distinguish between story and storytelling, warns Crawford. A story is fundamentally fixed, linear and non-interactive. A story is just a set of data. Storytelling, however, is a process and as such, is compatible with interactivity; a user can interact with a process to change its operation. Crawford describes the product that conveys interactive storytelling as an "interactive storyworld." An interactive storyworld is not a game with an added story. "It's a universe that contains all the dramatic elements the author wants the player to be able to interact with. A single traversal of this storyworld yields a story. A good storyworld is rich enough to permit many different and interesting traversals" (Crawford, 2004: p. 46).

2. Eggxistence – Practical application

Eggxistence is a survival game in which you must ensure not only your own survival but also the survival of your family and the larger community. You play as the leader of a colony of space owls on a distant planet in the far reaches of space. The game aims to demonstrate how the existentialist approach to game design detailed in this article can be put into practice.

2.1. Procedural rhetoric

Eggxistence is a survival game, although one of a different kind. The majority of survival games on the market revolves around the individual survival of the player. In *DayZ* for example, the context of the game compels the player to isolate himself from other players.

Absorbed by his quest for resources, the player has little incentive to collaborate with others. When he meets other players, it is in his own rational self-interest to kill them and steal their property. *Eggxistence*, in contrast, invites the player to consider not only the survival of his own character, but also the survival of the larger community. Threatened by both scarcity and alien wildlife, the survival of the player's character actually depends on the survival of others. While highlighting the interdependence of people, the game also draws attention to how the needs of the individual can nevertheless come into tension with the needs of the community as a whole.

The non-player characters (NPCs) in *Eggxistence* roam the game world at random. When an NPC encounters a resource in its path, he automatically tries to appropriate it or exploit it. For example, when an NPC finds food, he picks it up and eats it up. The procedures that dictate the behaviors of the NPCs, while rudimentary, manage nonetheless to meaningfully represent a real-world process known as "tragedy of the commons." A "tragedy of the commons" occurs when individuals, seeking to maximize their consumption of a common resource in open access, collectively overexploit that resource (Hardin, 1968). In the context of *Eggxistence*, the NPCs consume all the food they come across, which inevitably gives rise to a "tragedy of the commons" situation where this scarce resource becomes depleted. The player can enforce the resource sustainability by first appropriating the resource for himself and then redistributing it fairly to the hungry NPCs.

The lineage game mechanic is the core mechanic on which the structure and progression of *Eggxistence* builds upon. To ensure the survival of the family lineage through time, the player must develop relationships with the NPCs of his community. Once a romantic relationship is established between the player character and an NPC, they can procreate and give birth to a progeny. If the player character dies, the player then plays as his progeny. Throughout the course of the game, the player follows many generations of a family lineage.

2.2. Emerging gameplay

Eggxistence is designed as a non-linear, player-driven game. The player finds himself in an open world level (an island), in which he is free to roam around and find the scarce resources he needs to survive. Resources, NPC camps and enemy camps are all generated randomly across the level. In this virtual ecosystem, NPCs interact with each other and with the resources they find; enemies attack NPCs when they cross paths. Though the use of a crafting system, the player can combine together resources to craft technologies that will help him gather more resources.

2.3. Permanent death

The mechanic of permadeath is a source of tension for the player, a tension that is analogous to death anxiety. However, for this tension to exist, the player must first have something to lose in death. Experience points, money, inventory items are things that are inseparably

linked to the character controlled by the player. These things, because they require effort to obtain or are rare to find, gives value to the player character. In *Eggxistence*, the player uses an inventory system to manage the resources his character carries. These resources are scarce and essential to his and others' survival. If the player character dies, he is permanently removed from the game and so are the resources in his inventory.

Moreover, the player character has a limited lifespan, and therefore is destined to die at some point in the game. Survival games contain indicators of all kinds (health, hunger, thirst, body temperature, etc.) that are usually sensitive to the actions taken by the player. The age indicator featured in *Eggxistence*'s user interface is unique in this regard as it cannot be affected by the actions of the player. The player character is condemned to die and the player cannot do anything about it. The age indicator, through its visual feedback on the screen, constantly reminds him of this fact, which only heighten the tension of permadeath.

Permadeath has consequences that can be particularly frustrating for the player. The player can lessen the frustrating effects of permadeath by building an inheritance chest. By storing his most precious items in the inheritance chest, the player will be able to preserve them and pass them on to his descendants upon his death. The chest has a very limited storage space and can only contain a few objects. While this game element partly reduces the frustrating loss related to permadeath, it does not diminish the death anxiety felt by the player. The player must think long-term and delay gratification as he is constantly considering his imminent death.

2.4. Interactive storytelling

Eggxistence's storytelling emerges from the player's interactions with NPCs rather than from an already planned storyline. NPCs share their needs, moods and opinions about the player and the choices he makes through speech bubbles appearing over their heads. How others perceive us is, as Sartre emphasized, a key characteristic of intersubjectivity.

Living conditions are particularly harsh in the world of *Eggxistence*. By helping NPCs survive, the player can build rapport with them, from friendship to romantic relationship. However, NPCs can also develop romantic relationships with each other, which restricts the pool of eligible partners. This social dynamic brings an additional element of scarcity to the game: a scarcity of partners. Faced by both the scarcity of resources and scarcity of partners, the player will inevitably find himself forced to make hard choices that the others will strongly criticize.

Since the game world is both large and open, it can be difficult for the player to keep track of everything that happens there. A communication panel in the game’s user interface keeps the player updated on the status of each NPCs in his community. The communication panel alerts the player when a non-player character is attacked by an enemy, falls into a state of

starvation, or dies. It also informs the player when a new romantic relationship is formed within the community.

Conclusion

The research project presented in this paper began with the desire to answer a simple question: can a videogame be art? This question has proven to be very controversial for the past decades and has been studied from several perspectives. Raph Koster stipulates that video games will be recognized as art only when they will offer us, like any other forms of artistic expression, a better understanding of ourselves. According to Koster, the artistic legitimacy of video games is contingent upon their ability to represent the human condition.

The conceptual framework of this research relies on the psychological theory of the human condition, proposed by Yalom, characterized by four existential concerns: (1) meaning, (2) freedom, (3) death, and (4) intersubjectivity. Within this framework, those concerns were expressed respectively in the form of four criteria: (1) procedural rhetoric, (2) emergent gameplay, (3) permadeath, and (4) interactive storytelling. Borrowing insights from the leading designers in the field and examining specific case studies in computer games, we proposed an existentialist approach to game design and put it into practice by creating a video game. To the best of our knowledge, this paper was the first time these four existential concerns were studied conjointly under such a framework.

Eggxistence, as an video game experiment, meets the different criteria put forward by an existentialist approach to game design. First, the player gives meaning to his game experience based on the interactions he has with the processes of the game. Second, the game gives the player great freedom of movement and action and appeals to his judgment by placing him in front of real choices and consequences. Third, the permadeath mechanic makes the player's actions more meaningful by confronting him to the mortality of his avatar. Lastly, *Eggxistence* puts the player into a world of interactive storytelling; the player must deal with the perception virtual characters have of him.

Can a videogame be art? This research project demonstrated that, based on an existentialist approach, video games can represent the human condition and illicit a better comprehension of ourselves. Therefore, we can affirm that certain video games can be seen as art.

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Games

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