# VIDEO GAME ENVIRONMENTS AND DEPRESSION: HEALING ASPECTS OF CONTEMPORARY DIGITAL SPACES

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## THE TWO EPIDEMICS

The study explores the way in which contemporary video game environments deal with the depressive condition and the design aspects that are employed in order to develop digital and interactive spaces capable of affecting their users on an emotional level.

Widespread digital culture, and especially the prevailing phenomenon of video games, is developing today at such a speed that it can be regarded as a modern type of epidemic. Especially, the new generation, which Marc Prensky aptly called 'digital natives'[1], has grown up, fully familiar with computers, smart phones, tablets, internet use, and generally with new technologies, that encourage the "habitation" of the digital-analog reality. Recent statistic data verify this phenomenon. According to the Entertainment Software Association, the number of players worldwide has exceeded 1,8 billion since 2016, while seven hundred million of them concern web-based games.[2]

At the same moment, this observation is juxtaposed with the phenomenon of depression, one of the most debilitating but also one of the most widespread psychological conditions of the contemporary world. The latest data from the World Health Organization[3] proves that depression is a silent scourge of the modern age, surpassing three hundred million people, according to recent measurements. Interestingly, it is referenced as the "most common type of mental illness"[4], "the leading cause of disability worldwide" as well as "a major contributor to the overall global burden of disease". Additionally, it is strongly linked to suicide, which is the third leading cause of death in youth ages[5].

## SPATIAL PROMISES

Early research observations described the use of videogames as capable of provoking a depressive condition. However, recent multidisciplinary studies claim that according to recordings of brain activity in both players and depressed people, video games do not appear as the cause, but as the

neurological or psychological counterpart of depression. The importance of playing in the treatment of depression has had many interpretations: "A game is an opportunity to focus our energy, with relentless optimism, at something we're good at (or getting better at) and enjoy." In other words, Jane McGonigal explains "gameplay is the direct emotional opposite of depression."[6]

Excessive engaging in gaming has been referred as a functional "escape mechanism for, or coping with, underlying psychiatric disorders in attempt to alleviate unpleasant feelings, and to calm restless bodies"[7]. At the same moment we have a kind of targeted gamification[8]. Indeed, research has already used video games in order to help people with various disorders such as anxiety, post-traumatic stress, attention deficiency, or paranoia. While, at first sight, most of these games appear to be symptom oriented, one should also mention research on ideas such as "neurogaming"[9] or "electronic medicine"[10] which deal with neuroplasticity and cognitive abilities, while trying to tackle with the brain-origin of a condition. Eddie Martucci describes the aspirations for such a venture "We want this to be a mainstream option in any doctor's office, right next to Adderall."[11] At the present moment though, it appears that the majority of the games are keeping a salutogenic[12] approach on spatial experience.

In the current study a gamified medicinal condition is investigated through the experience of digital environments in contemporary video games. In the same context, the research focuses on the construction of video game promises, which are otherwise promises of digital realities, that can play an important role in the alleviation of the players' symptoms, and possibly their elimination too. Video games are observed in a double spectrum: firstly, as single case titles of latest video games which manifest a relationship to depressive states through their 'branding' identity or their promotional material and in some cases their research background, and secondly, as a comperative study of larger video game genes, commenting on the behavioural patterns of their gameplay and their relation to clinical or other relating symptomatological characteristics. Alongside an architectural point of view, depressive symptoms are spatially translated and afterwards discussed in the context of contemporary video game environments, therefore resulting in the creation of human experience.

## TARGETED DESIGN

Focusing on the case of depression, we can see games that have evolved pointing mainly to the direction of raising awareness about the phenomenon, fighting against the social stigma, or making a depressed person better understand what is happening to himself. More specifically, in cases such as 'Depression quest'[13], the representation of space is mainly textual and literal, as it revolves around the events taking place in the story. The few visuals consist of close ups of objects or details, showing the lack of open or distant view. Metaphorically, the whole story shows a space that is narrowing down - the options of the depressed diminish over time, and similarly the game options fall off. The game controls generally feel heavy and stodgy, almost dysfunctional, just like the experience of the depressive condition. Space in a representative form is almost inexistent in this game – which can be translated as the depressed being distant from his surroundings.
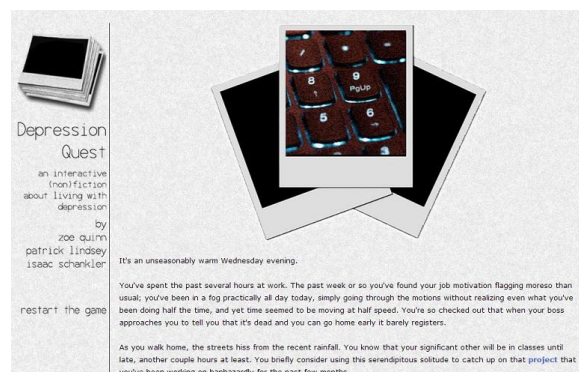
*Figure 1. Screenshot from "Depression quest". http://www.depressionquest.com*

In video game 'Actual sunlight'[14] – the player attempts to prevent Evan Winter from ending his own life (the name Winter makes an interesting association with that season of the year during which there is a high peak in depression episodes). The game represents the spaces in which Evan's life is taking place, a dull and disorganized house, which follows the dysfunctionality and dereliction of its owner's body and self. Various momentary changes of perspective that rarely appear on the screen, reveal visual details such as a bath mirror that is long broken, rain falling, or Evan lying on the bed for hours. The spatial representation is reflecting an inert state of rumination. The same spaces are alternating, expressing a sense of stillness, inertia, or in other words, a difficulty to change. One of the difficulties of depression is the feeling that you cannot 'move', evolve, change, proceed. The story script mentions "every night you think tomorrow is the day you are going to do it"[15]. The character moves in spaces that are represented in the form of ground floor plans, totally detached from the outer world, surrounded by total blackness. The depressed is at an introvert state, is submerging into oneself, and feels unable to interact with others or with the world.

The same spatial approach appears to the game 'Please knock on my door'[16], a similarly represented narrative through ground floor views of the house of the protagonist (a shadowy abstract figure) who also suffers from depression. The house manifests neglection and repetition of everyday mundane experiences. The whole world of this depressed hero is that intimate space of his house, through which the inner landscapes of his soul are projected. The depressed sinks in his house in the same way he is submerged into his mental state. The only case the camera's symbolic perspective changes, is when he looks out of his window.
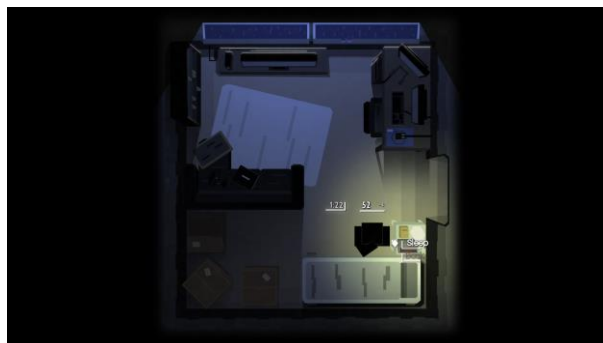


*Figure 2. Screenshot from "Please knock on my door". http://pleaseknockgame.com/*

In both games, the use of floor plan views, is interestingly offering a point of view which can be rethought in terms of treatment. The player can observe the situation, from a distance, from above,

from another point of view which gives the opportunity to evaluate things, actions, relationships. Seeing things from above also offers a sense of a superhuman power, giving at the same time a feeling of control over one's own life, one of the most fundamental action-steps against depression.

In video game 'Elude'[17], we have the representation of depression as an emotional landscape, where "happiness remains elusive". The word 'Elude' is referred as relating to Latin word 'e-ludere' meaning 'away from' and it is also deriving from the word 'ludo' meaning 'to play' and 'to trick.'[18] In a lethargic, catatonic world, the player is asked to find interest in things through 'resonating', things that he can enjoy, so that they can make him jump higher. In this case spatial organization is based on the concept of ascent and descent. Since depression is often described through the metaphor of going downwards, the game asks the player to move upwards towards the top of the trees where happiness lies. The player often falls and has to climb up repeatedly. The idea of moving in space on a vertical axis has a distinct use as a design tool for emotional impact, since the body's ability to move on this axis is restricted. Especially, if the body moves downwards, it is crushed on the ground, reminding us of the etymology of 'depression'[19]. Besides, the descent, symbolically, refers to the direction opposite from the sky (from where the light comes), which verifies the 'darkness' that often characterizes melancholic space, one of its most common metaphors.
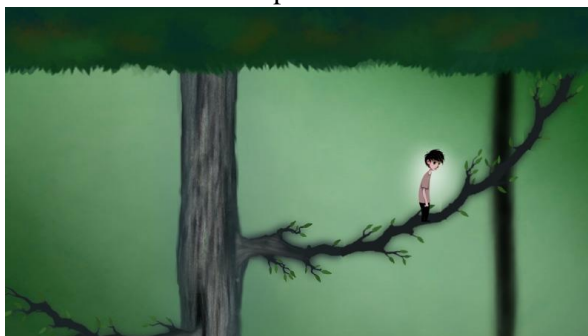


*Figure 3. Screenshot from "Elude". http://gambit.mit.edu/loadgame/elude.php*

In the game 'Inner vision'[20] a space of dialogue is represented. The player talks to a series of people trying to prevent them from suiciding, seeing only what the light allows him to see, but never seeing himself represented other than in the form of a series of thoughts. Every figure is surrounded by dark space, as if this darkness is cutting the depressed off from the rest of the world. Surrounding space here is also a sort of empty or even inexistent, reminding of the way the depressed subject withdraws into himself.

In other games such as such as 'Sparx'[21], 'Project Evo'[22], 'Personal Zen'[23] or 'Superbetter'[24] the player is asked to focus into things that are loved, precious and inspiring, or into things that give motivation to act. Thus, they have been approached as effective therapeutic tools. Some of them also use imaginary landscapes with many references to the beneficial for their health natural environment in order to evolve their gameplay.

## THE USE OF DIPOLES

However, one can observe that there are narratives in video games generally, that deal with some of the aforementioned spatialities, such as the experiential dipoles of light and darkness, flow and dysfunctionality, or ascent and descent in a different way. For example, in the game 'Child of light'[25] the player defies the powers of darkness, or in the game 'Where Shadows Slumber'[26] he becomes the light himself, (when he moves, the light moves). Also, in the game 'Luxuria Superbia'[27], the player

defies emptiness and colorlessness, bringing a colorful tunnel to life in a process which resembles to meditating.
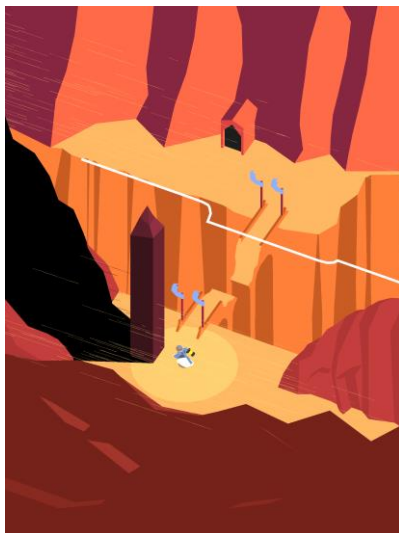


*Figure 4. Screenshot from "Where Shadows Slumber". http://www.whereshadowsslumber.com/*

In terms of flow and dysfunctionality, in games like 'Journey'[28] and 'Flower'[29], the player experiences a deeply emotional process of exploration and travelling, almost flowing freely in digital environments that evoke awe and wonder, leaving the player with a really positive experience. The game 'Proteus'[30] allows for the sublime of nature to trigger feelings that linger even after gameplay. Some other games such as 'Braid'[31] offer time manipulation mechanics which are very interesting in this context, since the depressed subject suffers from a distorted temporality, inhabiting anywhere else than the present, or even inhabiting an eternal pause.

Considering the dipole of ascent and descent, in games such as 'Undertale'[32] the player tries to return from the Underground to the surface of Earth, or in 'Alto's Adventure'[33] (in 'zen' mode), the player can enjoy a mountain descent without fear and sometimes without obstacles. Also, In the game 'Thomas was alone'[34] there is an interesting comment on the idea of 'falling'… "Thomas was absolutely fantastic at falling", which is reversed when finding an obstacle: "what if there was some kind of inverted fall – some way to 'jump'"[35]?
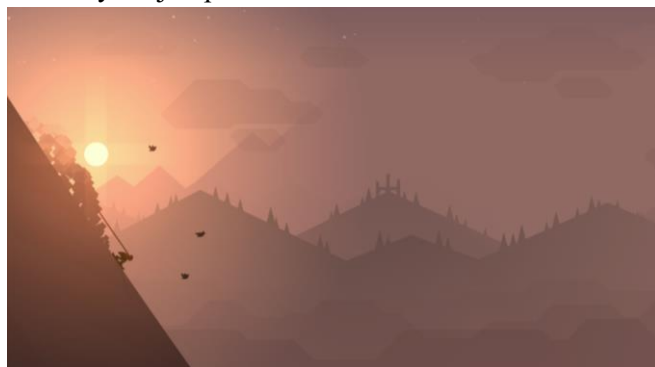


*Figure 5. Screenshot from "Alto's Adventure". http://altosadventure.com/*

**IMPLEMENTATION OF GAME ELEMENTS**
Therefore, does a video game really have to be specially designed or targeted to a mental condition in order to offer a therapeutic effect? After observing videogames that have been designed in the context

of depression and juxtaposing them with other entertainment games with similar spatial characteristics, one can realize that it might be possible to locate game elements, mechanisms or other general features relating to video gaming that can be implemented in design in such a way that, when used in a specific context and from specific users, they can contribute to the alleviation of symptoms, or to the therapeutic process itself. Or, contrariwise, from a salutogenic point of view, they can promote the well-being of every individual subject irrespectively of the concept of a specific target group.

This statement lies initially in the video game phenomenon itself. Video games make use of elements deriving from art, music, film and literature, mediums that have been long used for inspiration, emotional stimulation or representation of inner mental states, since antiquity. Director Guillermo del Toro describes, "I think video games are going to completely take over storytelling in our society."[36] – Video games offer motivation, a desire to act immediately, while keeping being inspired through the way. The actions of the player are constantly rewarded, and the player feels a desire to focus, to master the game, to direct it, or to gain control of it. But the most important of all, there is a preceding desire to enter into this other fictional world, "the narrative is finally subjectified"[37], a step that has been described as a form of escapism, but which, in another context, can be used as an exploration of a better, stronger and more positive version of the player's self.

## FROM TYPES OF SPACE TO TYPES OF EXPERIENCE

"Realization of space is a quite wide 'mindful' operational game of questions and responses about the architectural meanings"[38], and therefore of the respective design practices in video game contexts. Thus, if we look at game genres or typologies, we realize that they offer differentiated qualities of experience that can be used respectfully.

For example, Massively Multiplayer Online Role-Playing Games can promote social interaction and trust while experiencing common narratives, spaces, or events. First-person Shooters, can increase motivation and participation through competitiveness, through constant goal-setting and reward which is referred as affecting the way of thinking of the individual over time. Casual Games, can also stimulate the mind, while offering a generally improved mood which is alleviated from stress or anxiety through repetitive representation motifs, problem-solving and focusing. Specifically, solving puzzle games, makes an interesting contradiction with the dysfunctionality of the depressive condition. Running or platform games, overcome this sense of dysfunctionality through an experience of flow which contrasts the feeling of an eternal pause in which the depressed subject finds himself. Virtual Reality Gaming that represents serene or inspiring environments can also affect the player's mood through this multisensory spatial immersion that it offers. Video games with a strong narrative, such as games with character simulation, work impressively on depression, as the subject can explore his fears, face situations, or reestablish connections with his own life. Additionally, in roguelike games that the player experiences a permanent death, the individual can learn to cope with repetitive failure turning it into an accompanying feeling of achievement which offers meaning to the overall experience. Pet-simulation or even farm simulation video games encourage the depressed to overcome any lack of interest or feelings of neglect and return to the present through the inhabitation of this other environment. Location-based Augmented Reality Games encourage the player to reverse introversion by getting up and exploring the outside world. Or, in videogames where motion capture is implemented, the player's mood is radically affected by a more body-centric approach, in which the lethargic body becomes an active participant, transforming into an instrument of spatial experience one of the most fundamental qualities of the treatment of depression.

## THE NEED FOR A NEW 'READING'

Concluding, videogames manifest an ideal context for players to reconcile with the notions of "obstacle", "difficulty", or distant "goal", since these often constitute the backbone of the gameplay's structure as well as the gamers source of motivation and satisfaction. More specifically, video game environments that deal with depression provoke healing, alleviate symptoms, and encourage a deeper understanding of an intimate human condition through alternative approaches of the ways people experience and inhabit digital environments. However, one can realize that such specialized games are limited, and those already existing hardly make use of the spatial connotations that prove to have helpful associations with the treatment of depression.

The need for a new "reading" of the depressive condition arises, making use of this feedback - a new translation, which derives from the observation of a fundamental human need: firstly, to spatialize symptoms, in order to fully understand or communicate them to the outer world - the description of psychological conditions always proceeds with notions of space expressed mentally - and secondly, to experience or converse with it through a metaphoric realm - fictional game worlds form an ideal narrative mechanism for metaphoric schemata to take place. This means a series of spatial elements that can be implemented in the process of designing digital or interactive environments, either in therapy-oriented or even in entertainment video games.

It is important to note that the new generation which is growing up with video games spends billions of hours in these digital environments, and this is exactly what makes them so promising in terms of promoting health and wellbeing. Marc Wigley mentions that by choosing a video game, we choose an architecture[39]. In a similar sense, during gaming, we choose an 'experience', which always implies a way of 'being'. We consume spaces and versions of ourselves in video games - and at that exact point lies the potential of a player's confrontation with the depressive condition - space informs experience and consequently renders the mental state of oneself.

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