Esthetic Experiences of Digital Gamespace

Introduction

This paper is an exploratory work that seeks to couple together some of John Dewey's (1934) philosophical considerations regarding the nature and functioning of *esthetic experience*, and some of my own nascent ideas regarding the specificity of esthetic experience in player interactions with digital gameplay spaces. This argument presupposes that computer games and the fictional spaces they invite players to interact with, are contemporary *interactive art forms*. A close reading of John Dewey's philosophical reflections on esthetic experience as a consequence of ordinary interactions with everyday art forms, provides the basis for a philosophical treatment of interactive spatial representations in videogame fictional worlds as a source of esthetic experience.

I shall argue that this way of understanding ordinary esthetic experience as a core aspect of everyday life may be seen to have relevance for an oft debated issue in contemporary game studies: the question of how players manage the dynamic relationship between their experiences of fictional game-worlds, and their experiences of the actual world that also encompasses the game, which in its turn, is conceived of as an *interactive cultural artifact* that is also a contemporary *work of art*. In line with Malaby (2007) and others, I have argued (Coppock, 2012) that it is reasonable to consider fictional game-worlds full-blooded components of the real world, since they are digitally generated and remediated *sociocultural artifacts*. As such, their existence depends both on the game itself actually being *playable* by someone who enters into an intimate participatory interaction with its fictional world and rules, and also on the game-world being rendered materially interactable with, thanks to highly specialized technological resources only our globalizing cultures can make available.

In an earlier contribution to the above-mentioned debate regarding the nature of the relationship between player experiences of what ought, or ought not, go on in fictional game-worlds they play in, and in the real life cultural contexts they are also a part of, Jesper Juul (2008) suggests substituting Johan Huizinga's (1938, 1947) metaphorical notion of the "Magic Circle" of play, with that of the "Puzzle Piece". His rationale for suggesting this is that Huizinga's original metaphor, as T.L. Taylor (2007) and others, e.g. Calleja (2012), have pointed out, is all too often erroneously cited in a "binary" way, characterizing the experiential realm of gameplay as a kind of "utopian magic space", completely cut off from "the cares of everyday life and the world".

Juul's principle argument is that there can is sufficient evidence from both casual observation and empirical research on play, games and sociality, that players are continually redefining and renegotiating the symbolic, pragmatic and experiential boundaries of gameplay space in relation to own personal points of view and mutual interests, which are necessarily coupled to their past and present experiences of interactions in other actual world spaces – physical, psychological, sociocultural or otherwise. He suggests that "the Magic Circle is the boundary that players negotiate", and that "[g]ame scholarship should be about analyzing the conventions of this boundary, and how and when this boundary is created." (2008: 62) Also of interest for our present discussion is his (2008: 61) three frames model of how every game action can be cognitively and emotionally evaluated by players according to three distinct types of considerations: i) the game as a *cultural context*, where desire for *management of the social situation* is primarily in focus; ii) the game as *experience*, where desire for *an interesting game* is in focus; and finally the game as goal-orientation, where desire *to win* is in focus. "Games", argues Juul "are not exactly harmless, but

have negotiable consequences" (2008:) in real life. Furthermore, the assignment of such consequences is something that "can be negotiated on a play-by-play, location-by-location, person-to-person basis" (2005: 43).

While pointing out that Huizinga himself in fact described play (or game) spaces as just one type of social space among others" (2008: 59), Juul also argues that though the Magic Circle can be seen as "a description of the salient differences between a game and its surrounding context", this does not necessarily imply automatically that "a game is completely distinguished from the context in which it is played" (2008: 60). And, in fact, though Huizinga (1989 (1947): 10) speaks of play spaces as "temporary worlds within the ordinary world, dedicated to the performance of an act apart.", he also draws attention to the fact that "[a] play-community generally tends to become permanent even after the game is over. Of course, not every game of marbles or every bridge-party leads to the founding of a club. But the feeling of being "apart together" in an exceptional situation, of sharing something important, of mutually withdrawing from the rest of the world and rejecting the usual norms, retains its magic beyond the duration of the individual game." (1989 (1947): 12).

This kind of "leakage" over into our everyday life, of social relationships originally deriving from shared game-play experiences "within" the Magic Circle of a game, is well known also today, as in cases of local and regional meetings, concerts and other events organized by players of multiplayer online games like World of Warcraft", and this certainly seems to support Juul's conceptualization of the Magic Circle as a "boundary that players negotiate." So, to round off this initial opening section of our discussion, let us briefly go back to Johan Huizinga again, where he, as a final flourish on the very last page of his "Homo Ludens. A Study Of The Play-Element In Culture", emphasizes that:

> "Play, we began by saying, lies outside morals. In itself it is neither good nor bad. But if we have to decide whether an action to which our will impels us is a serious duty or is licit as play, our moral conscience will at once provide the touchstone. As soon as truth and justice, compassion and forgiveness have part in our resolve to act, our anxious question loses all meaning." (1989 (1947): 213)

This way of thinking (also ethically) in socio-cultural terms of players as continually evaluating and weighing their practical "insider" knowledge of what ought or ought not be able to go on within the Magic Circle of a fictional game-world, according to its own special rules and norms, against their practical "outsider" knowledge of what ought or ought not be able to go on in our everyday "real" world with its rules and norms, also links up well with other already well-explored understandings of readers as engaging actively in more or less willed forms of "suspension of disbelief" while reading literary texts (Eco, 1989)[1], and players participating in alternative reality games doing the same thing (Coppock & Ferri, in press). Indeed, such temporary "resetting", or holding in abeyance of certain types of beliefs regarding everyday experience appears to be one of the principle ways players adapt their prior knowledge of real world norms and practices to cope with the often novel and unusual requirements they meet in digital (and other) gameplay spaces, in order to maximize the quality of their playful interactions with the fictional game world.

Game designers Jane McGonigal (1999) and Dave Szulborski (2005) also refer to player strategies in experiential terms, as a fine-tuned interplay between two distinct, mutually incompatible conceptual frames: *This-Is-A-Game* (TIAG) and *This-Is-Not-A-Game* (TINAG). This approach has been useful in understanding how players strategically adapt to ludic challenges posed by large

---

[1] "I believe that you can reach the point where there is no longer any difference between developing the habit of pretending to believe and developing the habit of believing." (Umberto Eco, Foucault's Pendulum, p. 386)

scale role-playing games often referred to as *Pervasive Games*, *Alternative Reality Games*, or *Hybrid Reality Games* (Montola, Jaakko, Waern (2007). These games require players to explore a real world environment (a town, city, countryside, etc.), while simultaneously carrying out role-play defined tasks, based on what is supposedly going on in an "overlapping" digitally mediated fictional game world, by way of which instructions, clues etc. may be transmitted to, or solicited by, players at any given time via their mobile devices, desktop computers, or other more traditional media, such as posters in the street, television, cinema, telephone calls, letters, newspapers, etc..

Dewey's conception of Art as Experience

In Dewey's philosophical perspective, as laid out in his seminal work on esthetics: *Art as Experience* (1934), esthetic experiences of what we commonly define as "art" pose a particularly interesting problem for philosophy, since our individual and collective attitudes regarding artistic forms of expression of necessity are influenced by our past histories as experientially aware beings with an innate tendency to sensibly relate to the events and objects that populate our world, leading us to experience varying degrees of *desire and emotion* as we interact with them over time:

> "[T]he organism which responds in production of the experienced object is one whose tendencies of observation, desire and emotion, are shaped by prior experiences. It carries past experiences in itself not by conscious memory, but by direct charge. This fact accounts for the existence of some degree of expressiveness in the object of every conscious experience. […] What is pertinent to the topic of esthetic experience turns upon the way in which the material of past experience, which loads present attitudes, operates in connection with material provided by means of the senses" (1934: 122)

If we now turn for a moment to the "Magic Circle" debate, we can see that Dewey's reference here to "the material of past experience, which loads present attitudes", and "operates in connection with material provided by means of the senses" seems to support the notion that it is not realistic to claim that game-worlds constitute a "utopian magic space" completely cut off from "the cares of everyday life and the world".

More importantly, our esthetic experiences of artistic or other objects in the environment also depend on our intimate interactions with – and our changing understandings of – environmental processes that give rise to, in Dewey's words, "a combination of movement and culmination, breaks and re-unions" which we experience as characteristic for the actual world:

> "Because the actual world, that in which we live, is a combination of movement and culmination, of breaks and re-unions, the experience of a living creature is capable of esthetic quality. The live being recurrently loses and re-establishes equilibrium with his surroundings. The moment of passage from disturbance into harmony is that of intensest life" (1934: 17)

Dewey sees such moments of passage from initial tension-filled states of "disturbance" – either within us, and/or in relation to the world as it actually is – to a new state of "harmony", as constituting the very core of human esthetic experience. Memorable transitions of this kind are, in his view, the most intense moments we are able to experience in our lives, since they are associated with a passage from a destabilizing state of "disturbance" into a new state of "harmony", which is experienced esthetically as a fundamental restructuring of remembered experience, coupled to a emotionally valued re-establishment of a new sense of equilibrium both within ourselves, and in relation to the various life-worlds we inhabit.

This understanding of the emergence of esthetic experience as based on a new remediation and consolidation of our past and present experiences of participating in processes of transitional environmental change, constitutes the very core of Dewey's philosophical approach to understanding all forms of artistic endeavor as a significant aspect of our everyday lives. He then goes on to point out that traditional theoretical approaches to the esthetics of artistic objects have tended all to often to neglect their actual *conditions of origin* and *operation in experience*, thus isolating them from the continuity with the ongoing flow of life and endeavor that they actually are an integral part of:

> "When artistic objects are separated from both conditions of origin and operation in experience, a wall is built around them that renders almost opaque their general significance, with which esthetic theory deals. Art is remitted to a separate realm, where it is cut off from that association with the materials and aims of every other form of human effort, undergoing, and achievement. A primary task is thus imposed upon one who undertakes to write upon the philosophy of the fine arts. This task is to restore continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings, and sufferings that are universally recognized to constitute experience." (1934: 3)

After having established his principal philosophical objective as being a systematic restoration of the continuity between works of art and everyday experience, he proceeds to delineate a brief sketch of the thinking that lies at the very core of his approach:

> "In order to *understand* the esthetic in its ultimate and approved forms, one must begin with it in the raw; in the events and scenes that hold the attentive eye and ear of man, arousing his interest and affording him enjoyment as he looks and listens: the sights that hold the crowd—the fire-engine rushing by; the machines excavating enormous holes in the earth; the human-fly climbing the steeple-side; the men perched high in air on girders, throwing and catching red-hot bolts." (1934: 3)

He goes on to carefully point out that:

> "The sources of art in human experience will be learned by him who sees how the tense grace of the ball-player infects the onlooking crowd; who notes the delight of the housewife in tending her plants, and the intent interest of her goodman in tending the patch of green in front of the house; the zest of the spectator in poking the wood burning on the hearth and in watching the darting flames and crumbling coals. These people, if questioned as to the reason for their actions, would doubtless return reasonable answers. The man who poked the sticks of burning wood would say he did it to make the fire burn better; but he is none the less fascinated by the colorful drama of change enacted before his eyes and imaginatively partakes in it. He does not remain a cold spectator." (1934: 5)

Since our lived participatory interactions with the environment primarily afford our everyday esthetic experiences, Dewey goes to considerable pains to point out that all too often we are negatively influenced by theoretical models of esthetic experiences of art that seek artificially to isolate experiences of "officially recognized" forms of artistic expression from the myriad of esthetic experiences that populate, and give meaning to, the ongoing flow of everyday life:

> "So extensive and subtly pervasive are the ideas that set Art upon a remote pedestal, that many a person would be repelled rather than pleased if told that he enjoyed his casual recreations, in part at least, because of their esthetic quality." (1934: 5)

Then, as he subsequently goes on to point out:

> "Many a person who protests against the museum conception of art, still shares the fallacy from which that conception springs. For the popular notion comes from a separation of art from the objects and scenes of ordinary experience that many theorists and critics pride themselves upon holding and even elaborating." (1943: 6)

Whereas, from the philosophical standpoint he is proposing, which seeks to take into account the evolutionary origins, and emergence over time of *ordinary* forms of esthetic experience that colour our day to day lives:

> "Even a crude experience, if authentically an experience, is more fit to give a clue to the intrinsic nature of esthetic experience than is an object already set apart from any other mode of experience. Following this clue we can discover how the work of art develops and accentuates what is characteristically valuable in things of everyday enjoyment. The art product will then be seen to issue from the latter, when the full meaning of ordinary experience is expressed, as dyes come out of coal tar products when they receive special treatment." (1934:11)

So, at this point, Dewey seriously begins to address the challenge of precisely laying out a practical investigatory framework based on his own theoretical position, which he achieves first and foremost by indicating a limited number of key issues that he believes need to be taken into account in this connection:

> How is it that the everyday making of things grows into that form of making which is genuinely artistic? How is it that our everyday enjoyment of scenes and situations develops into the peculiar satisfaction that attends the experience which is emphatically esthetic? These are the questions theory must answer. The answers cannot be found, unless we are willing to find the germs and roots in matters of experience that we do not currently regard as esthetic. (1934:12)

This brief statement of intent is then followed by a description of the principal investigatory pathway that he believes need to be followed to begin with:

> We cannot answer these questions any more than we can trace the development of art out of everyday experience, unless we have a clear and coherent idea of what is meant when we say "normal experience." Fortunately, the road to arriving at such an idea is open and well marked. The nature of experience is determined by the essential conditions of life. […] The first great consideration is that life goes on in an environment; not merely **in** it but because of it, through interaction with it. […] At every moment, the living creature is exposed to dangers from its surroundings, and at every moment, it must draw upon something in its surroundings to satisfy its needs. The career and destiny of a living being are bound up with its interchanges with its environment, not externally but in the most intimate way. (1934:13)

Here, as we can see, he puts a good deal of effort into emphasizing that the life of an organism like ourselves does not merely exist *within* an environment, it also depends on its own intimate interactions, or interchanges, with this selfsame environment, all of which contribute from day to day to defining the organisms *essential conditions of life*. He then goes on to elaborate his previously mentioned notion of "combination of movement and culmination, breaks and re-unions" which, in his view, best characterizes the more general conditions of life offered to us by the environment and our relationships with it. On this central theme I now cite Dewey directly at some

considerable length, since this following section expresses one of the most central theses of his whole theory:

> "Life itself consists of phases in which the organism falls out of step with the march of surrounding things and then recovers unison with it—either through effort or by some happy chance. And, in a growing life, the recovery is never mere return to a prior state, for it is enriched by the state of disparity and resistance through which it has successfully passed. […] These biological commonplaces are something more than that; they reach to the roots of the esthetic in experience. The world is full of things that are indifferent and even hostile to life; the very processes by which life is maintained tend to throw it out of gear with its surroundings. Nevertheless, if life continues and if in continuing it expands, there is an overcoming of factors of opposition and conflict; there is a transformation of them into differentiated aspects of a higher powered and more significant life. The marvel of organic, of vital, adaptation through expansion (instead of by contraction and passive accommodation) actually takes place. Here in germ are balance and harmony attained through rhythm. Equilibrium comes about not mechanically and inertly but out of, and because of, tension. There is in nature, even below the level of life, something more than mere flux and change. Form is arrived at whenever a stable, even though moving, equilibrium is reached. Changes interlock and sustain one another. Wherever there is this coherence there is endurance. Order is not imposed from without but is made out of the relations of harmonious interactions that energies bear to one another. Because it is active (not anything static because foreign to what goes on) order itself develops. It comes to include within its balanced movement a greater variety of changes. [1934: 14]
> Order cannot but be admirable in a world constantly threatened with disorder—in a world where living creatures can go on living only by taking advantage of whatever order exists about them, incorporating it into themselves. In a world like ours, every living creature that attains sensibility welcomes order with a response of harmonious feeling whenever it finds a congruous order about it. For only when an organism shares in the ordered relations of its environment does it secure the stability essential to living. And when the participation comes after a phase of disruption and conflict, it bears within itself the germs of a consummation akin to the esthetic." [1934: 15]

Here, Dewey explicates in detail his previously signaled intention to frame the emergence of ordinary esthetic experience through a scientifically based *evolutionary narrative* regarding the evolution and growth of biological life forms on earth. In this wider picture of things, as we can see from the citation above, "phases in which the organism falls out of step with the march of surrounding things and then recovers unison with it—either through effort or by some happy chance" are what actually set the stage for what he refers to as the "marvel of organic, of vital, adaptation through expansion (instead of by contraction and passive accommodation)".

Characteristic for such processes of *adaptation through expansion* is that "in a growing life, the recovery is never mere return to a prior state, for it is enriched by the state of disparity and resistance through which it has successfully passed". Thus, one concrete result of this type of adaptation is a kind of growth of meaning, or understanding, where something new and lasting has actually come into being: which too, if we like, could also be considered to represent the emergence of one single instance of *cultural innovation*.

It is moments like this, characterized by emergence of a state of "balance and harmony attained through rhythm" and fuelled by "tension" that, in Dewey's words, are "the roots of the esthetic in experience", and they are also moments in which *form* itself – i.e. a new instance of potentially satisfying *order* – is actually brought into being.

Esthetic experiences of digital game-space

To begin with, we shall look in some more detail at the final paragraph of the long citation from Dewey in the previous section above, as it offers us a key conceptual pathway for developing a clearer understanding of player esthetic experiences in digital gameplay spaces, which we shall consider as representing a contemporary form of *interactive art*.

We repeat once more Dewey's words on the esthetic potential of *participatory experience* of transitions from perceived disorder to order:

> "Order cannot but be admirable in a world constantly threatened with disorder—in a world where living creatures can go on living only by taking advantage of whatever order exists about them, incorporating it into themselves. In a world like ours, every living creature that attains sensibility welcomes order with a response of harmonious feeling whenever it finds a congruous order about it. For only when an organism shares in the ordered relations of its environment does it secure the stability essential to living. And when the participation comes after a phase of disruption and conflict, it bears within itself the germs of a consummation akin to the esthetic."

In pointing out that "only when an organism shares in the ordered relations of its environment does it secure the stability essential to living", and that "when the participation comes after a phase of disruption and conflict, it bears within itself the germs of a consummation akin to the esthetic", Dewey is not only underlining the importance for further growth and development of our species, of our quotidian *participatory interactions* with our environment, but also the fact that esthetic experience itself furnishes us with a useful sensory device that signals to us that we are witnessing the coming into being of a new (presumably "benevolent"), instance of *emergent order*.

An important keyword in this connection is the notion of "participation", which interestingly enough bears with it other semantic and cultural connotations, with respect to the more "mechanical" term "interaction".

As we know, digital game spaces are first and foremost technologically facilitated shareable fictional spaces designed to foster and regulate, by way of their built-in rule systems (refs), specific perceptual modes of player interactions with them. Numerous game designers and scholars (e.g. Salen & Zimmerman, 2004, Tavinor, 2009)) point to the uniqueness of the many specialized forms of interactivity that digital and other game spaces offer, especially seen in relation to less dynamic cultural contexts hosting institutionalized art forms, where, for example, interacting physically (even by proxy) with paintings or other artifacts on display is not generally permitted. Today, most art galleries and museums have installed sensory devices that sound an alarm if a visitor steps too closely up to a displayed work of art. Some forbid photography too – a practical rule that is usually justified for a number of different reasons, for example, that repeated camera flash impulses over time may damage picture color pigment, irritate other visitors, while the presence of photographers in action is also considered a disturbing element in the display locale. Other more recent justifications regard copyright issues related to storage, reuse and diffusion of digital images of art objects.

Today, however, an increasing number of artists and institutions dedicated to traditional art forms – theater, sculpture, installation art and so on – seem to have been inspired by *interaction design* principles similar to those of digital games, and ludic and social media in general, thus offering audiences a more *participatory* embodied experience of displayed contemporary art forms.

Examples of this are theater performances which invite audience members to interact spontaneously with actors during a performance, on- or off-stage; 3D installations that invite visitors to actively explore the inside of the installation space, manipulate objects, and leave written or recorded messages for the artist and other visitors; interactive video-art and audio-game projects (Cabañes, 2013) that use movement sensors to create dynamic changes in visual forms projected onto display area walls, and / or modulations of the sound field as experienced by players, in direct response to their own movements or actions within the exhibition space.

Another new area of interactive digital media design now being seriously explored is *interactive digital storytelling*[2], the concrete manifestations of which may, or may not, be considered, or designed as, games. The *International Conference for Interactive Digital Storytelling* conference series (ICIDS) has a long-standing tradition of bringing together theoretical and practical approaches to the field in an open environment that stimulates interdisciplinary dialogue. The 2013 conference theme i "Connecting Narrative Worlds" expresses an ongoing need to build conceptual and practical bridges between different research and practice domains such as artificial intelligence, interaction design, transmedia and digital art, narratology and digital game studies, in order to discover ways to make more effective use of the potential of interactive narrative.

On a more general level, in "Inventing the Medium. Principles of Interaction Design as a Cultural Practice" (2012), interaction designer Janet H. Murray, points out that:

> "Every digital project involved spatializing in some form, including maps, information spaces, locations of the real world, virtual places. In all these environments, designers should focus on providing agency in navigation by clearly indicating the current location of the interactor, the relationship among the elements that are within the digital site, and the extent and location of boundaries." (2012, p. 159)

She encourages interaction designers to take account of, and utilize, as wide a range of spatial conventions as possible in order to maximize *interactor agency* in digital space navigation, through use of "containers": lists, tables, virtual folders and "landscapes" consisting of a large navigational space furnished with smaller, discretely recognizable *places*, in conjunction with methods and tools to facilitate user agency: location-specific spatial mappings, interactive time-lines, animations, 3D displays, and so on. Murray is here speaking of interaction design in its widest possible sense, the concrete results of which we are most accustomed to meeting as embodied in interfaces designed for corporate and personal computing systems, digital mobile devices and interactive modeling and simulation systems for use in medical and other research settings, and in enterprise settings such as industrial design, production and marketing.

Of course, anyone who has ever played a digital game, either on- or offline, will instantly recognize that game worlds utilize exactly these same kinds of interaction design conventions for handling players' fast-moving participatory experiences of the different interactive spatial configurations types they encounter during play. Indeed, the concepts and mechanics characterizing most of the emergent spatial conventions mentioned above, were first developed and experimented with during digital game-world building and testing. Games always have been, and will doubtless always remain, a florid, highly challenging test ground for core interaction design principles, and for developing early mock-ups of new emergent interactive systems of all kinds.

---

[2] See for example the following international conference, ICIDS 2013 "Connecting Narrative Worlds" to be held at the beginning of November 2013 in Istanbul, Turkey, whose principal theme is "Connecting Narrative Worlds": http://gamesandnarrative.net/icids2013/ See also http://icids.org for further information on this conference series.

Indeed, the recognizable, often highly pleasurable, *shock of realization* that some new interaction design principle we suddenly encounter on, say, a mobile device after updating its operating system, or in a new release of a well-known appreciated game like *Super Mario* or *Grand Theft Auto*, is probably going to make some sides of our lives more interesting, challenging, enjoyable and easy to manage – and perhaps even contribute to opening up for the emergence of other, even more innovative, solutions in the future, thus further extending our sense of competence and agency – can in itself be seen as an example of Dewey's take on how *ordinary esthetic experience* functions in everyday life in our technologically advanced actual world.

So, to round off our discussion by returning to capture some of the why's and wherefores of our esthetic experiences of designed digital gameplay spaces, we shall return for a moment to Dewey's notion of "balance and harmony attained through rhythm", and his linked conviction that "[e]quilibrium comes about not mechanically and inertly but out of, and because of, tension."

Within the international game and education research communities, considerable attention has been directed over the years to expanding our understandings of the fact that really good games – precisely because they can be designed and consensually agreed upon to have negotiable consequences in the real world – can serve as excellent vehicles for learning, not only to become a good player of some given game, or games, but also in developing individual and group problem-solving skills, challenging traditional forms of education (Gee 2007, Jenkins 2008). It is also clear that learning, whether it occurs within the negotiated boundaries of a temporary "Magic Circle" of a single-, or multi-player, fictional gameplay world, or in some other formal or informal social environment in the real world, if it is going well, can be a very satisfying experience indeed, and thus present us with a certain degree of esthetic stimulus.

It is also clear, from the existence of pedagogical terms such as "learning curve", that successful learning processes, playful or not, always incorporate some degree of Dewey's notion of "balance and harmony attained through rhythm", where "[e]quilibrium comes about not mechanically and inertly but out of, and because of, tension." If in a real world classroom, or in a game-play fictional world, there is no aspect at all of built-in tension and the possibility that participatory interactive agency by students or players will activate transitions from experienced forms of tension to some form of new, more well-structured equilibrium, there can, of course, be no experience on the their part of the sublime esthetic satisfaction of successfully completing a learning task, solving a puzzle, breaking a code, finding the right sequence of doors, lifts and passages to escape from an exploding underground atomic research center, choosing exactly the right weapon to conquer a menacing ghoul, etc.

Since intelligent and diligent teachers and game designers are naturally painfully well aware of the vital importance for their own personal and professional success of giving students and players opportunities to experience themselves as interactively participating as agents in realizing exciting movements from tension to new equilibrium (or form), for the success of their pedagogy and games – which after all is a real bread and butter issue for both in a highly competitive globalizing world , I think it is safe to conclude that well-designed classroom and digital game-play spaces, are, and hopefully will continue to be, excellent vehicles for experimenting (or playing) with new forms of participatory interactive agency that offer access to (extra)ordinary esthetic experiences, as new forms of order emerge from tension, while being a whole lot of fun too!!

Appendix

In what follows I briefly indicate (with only a few minimal comments[3]: see the linked videos and the respective designer/producer websites for more information) just a few examples of some esthetically interesting alternative game space design strategies in contemporary digital game art, which give an idea of emergent, non-traditional ways of imagining and realizing the art of digital gamespace design.

I also include two images from Juan Solanas' film "Upside Down", the twin planet fiction worlds of which strike me as a very interesting and potentially challenging field for game designers to lay their hands on in the future (if they have not already begun to do so).

Screenshot: "Shift 4" Armor Games[4] (2009)[5]
http://www.youtube.com/watch?v=bogHqx-aYB0

---

[3] My thanks go to Eurídice Cabañes (2013) for pointing to these and other interesting recent works. The brief footnote descriptions of each of these games are my translations from Spanish of her comments on each game in her article "La Percepción del Espacio en los Videojuegos. Transgrediendo los Limites de la Pantalla" in the first number of the new Spanish game studies journal: *Bit Y Aparte*.
[4] http://armorgames.com
[5] Shift 4 is a maze in which space is reversed (transmuting the background into explorable space) by pressing the shift key, offering a completely new way of exploring space, since it requires us to play in, and inhabit, a bipolar space where we have to keep in mind both spatial options, though both can never be valid at one and the same time.

Screenshot: "Cardboard Box Assembler" Adult Swim Games[6] (2011)[7]
http://www.youtube.com/watch?v=oEfu7lt8oikù

Screenshot from "Closure", Glaiel Games[8] (2012)[9]
http://www.youtube.com/watch?v=b_g5_TGwWXE

---

[6] http://games.adultswim.com

[7] Cardboard Box Assembler is a game that mixes gameplay mechanics in two and three dimensions in a masterly way. Within scenarios depicted in the form of cubes, we can experience an interesting dynamics deriving from a blend of a platform gameplay mechanics in two dimensions, with the inherent potential of a three dimensional world, thus giving rise to such strange situations as finishing up standing on the wall or ceiling of a room in which moments before we were standing on the ground. In this case, the game mechanics themselves are linked inextricably to the construction of space.

[8] http://www.glaielgames.com

[9] Closure: In this game, space is determined by light: if you do not see the ground, then there is no ground on which you can stand, if you do not see the wall, the wall does not exist. Based on the above phenomenological assumptions, the player must manage carefully the lighting in order to define the space and be able to move around the various screens.
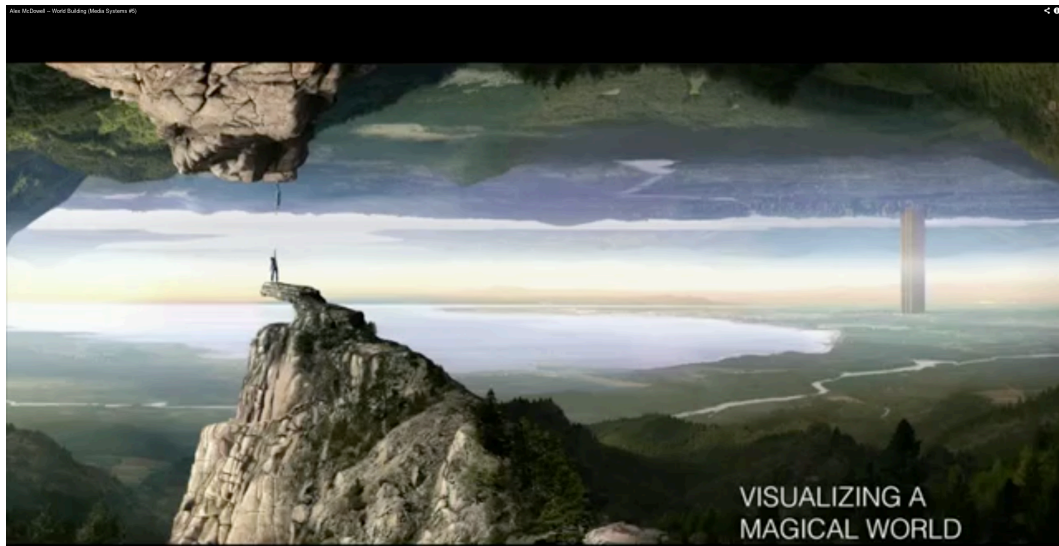
Cinematographic World: "Upside Down", Juan Solanas (2013)[10]

Cinematographic Set: "Upside Down", Juan Solanas (2013)

Bibliography

Cabañes, E. 2013, "Transgrediendo los limites de la pantalla", *Bit Y Aparte*, No.0 Julio, Madrid: Sello Arsgames 2013: 64-75. http://euridicecabanes.es.tl/La-percepci%F3n-del-espacio-en-los-videojuegos.htm (accessed September 15 2013)

Calleja, G. 2012, "Erasing the Magic Circle", in Sageng, John Richard; J Fossheim, Hallvard; Mandt Larsen, Tarjei (Eds.), *The Philosophy of Computer Games*, Dordrecht, Heidelberg, New York & London: Springer, 77-91.

Coppock, P.J. 2012, "Are Computer Games Real?", in Sageng, J.R., Fossheim, H., Mandt Larsen, T. (Eds.), *The Philosophy of Computer Games*, Dordrecht, Heidelberg, New York & London:

---

[10] See Alex McDowell's conversation at SIGGRAPH 2012 on the making of Juan Solanas' 2013, film, and some of the technical and practical challenges of "narrative world building" in that connection: http://www.youtube.com/watch?v=vD9-Rg4iBJc (accessed September 15 2013).

Springer, 259-277.

Coppock P.J. & Ferri, G. in press, "Serious Urban Games: From Play In The City To Play For The City". To appear in Tarantino, M. & Tosoni, S. (Eds.) *Media And The Social Shaping Of Urban Space*, Cambridge: Cambridge Scholars Publishing.

Dewey, J. 1934, *Art as Experience*, New York: Perigee Books. http://www.scribd.com/doc/40047985/Art-as-Experience-John-Dewey (accessed September 15 2013)

Eco, U. 1989, *Foucault's Pendulum*. New York: Harcourt, 1989; London: Secker and Warburg.

Gee, J.P. 2007, *What Video Games Have to Teach Us About Learning and Literacy*, Basingstoke, New York: Palgrave Macmillan.

Hickman, L.E., Alexander, T.M. (eds.), 1998, *The Essential Dewey, Volume 1, Pragmatism, Education, Democracy*, Bloomington & Indianapolis: Indiana University Press.

Huizinga, J. 1989 (1947), *Homo Ludens. A Study Of The Play-Element In Culture*, London, Boston & Henley: Routledge & Kegan Paul. http://www.scribd.com/doc/60407308/Homo-Ludens-A-Study-of-the-Play-Element-in-Culture-Huizinga (accessed September 15 2013)

Henry Jenkins, 2008, Convergence Culture: Where Old and New Media Collide, New York: NYU Press.

Juul, J. 2005, *Half-Real. Video Games Between Real Rules and Fictional Worlds*, Cambridge (MA), London.

Juul, J. 2008, "The Magic Circle and the Puzzle Piece" in In Stephan Günzel, Michael Liebe and Dieter Mersch (eds.): *Conference Proceedings of the Philosophy of Computer Games 2008*. Potsdam: Potsdam University Press, 56-69.

Malaby. T. 2007, "Beyond Play: A New Approach to Games", in: *Games and Culture* 11/2, 225-244.

McGonigal, J. 1999, *This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century*. http://avantgame.com/McGonigal_THIS_MIGHT_BE_A_GAME_sm.pdf (accessed September 15 2013)

Montola, M., Stenros, J., Waern, A., 2009, *Pervasive Games: Theory and Design*, Burlington (MA): Morgan Kaufmann.

Dave Szulborski, 2005, *This Is Not a Game: A Guide to Alternate Reality Gaming*, Lulu.com

Salen, K. & Zimmerman, E. 2004, *Rules of Play. Game Design Fundamentals*, Cambridge (MA)& London: MIT Press.

Tavinor, G. 2009, "Videogames, Interactivity, and Art", *Aesthetics Online*: http://aesthetics-online.org/articles/index.php?articles_id=44 (accessed September 15 2013)

Taylor, T.L., 2007. "Pushing the Borders: Player Participation and Game Culture" in J. Karaganis (ed.), *Network_Netplay: Structures of Participation in Digital Culture*, New York: Social Science Research Council, 112-130.