The Philosophy of Computer Games Conference, Malta 2016

Play, effect, reflect: A phenomenological study of reflective self-consciousness in players' experiences of digital games

Josef-Florian Micallef

Introduction

Game studies have long moved away from the notion that games should merely be considered entertainment products. Over the years, it has been shown how games can also be educative, inspire critical thinking, or act as tools to inspire social change. (see e.g. Bogost 2007; Flanagan 2009; Frasca 2004; Gualeni 2013, 2014) One characteristic of digital games that has not yet been analysed in depth is the ability players have for reflective self-consciousness (or what will be referred to as self-reflection) when playing digital games. The self-reflection players can experience while playing digital games is the main study, and is looked at in relation to characteristics of interactive media, using a phenomenological approach.

Various theories have been applied to a player's subjective experiences during play, including presence, (McMahan 2003; Tamborini and Skalski 2006) self-presence, (Steuer 1992; Lee 2004; Tamborini and Bowman 2010) immersion, (Murray 1997) incorporation, (Calleja, 2011) double-consciousness, (Salen and Zimmermann 2003) and the player-figure relation model (Vella 2014). However, these theories have not been studied in relation to self-reflective consciousness. Furthermore, there have been very few studies which have focused specifically on both self-reflection of players in digital games (see e.g. Kline 2014; Morosini & Pannese 2013) and self-transformation (Mateas & Stern 2004; Barab et al. 2010). However, none of these studies discuss the subjects from a purely phenomenological standpoint.

This paper aims to build on these studies, and act as a useful tool for game designers and academics who wish to understand how the interactivity in games can be used to make players reflectively self-conscious of themselves and their experiences within the game. The paper also serves as further insight to game theorists who study the experience of players and phenomenology in games.

It has to be pointed out that in this paper, I will attempt to analyse reflective self-consciousness and self-transformation in the experience of avatar-based games which involve objectives and challenges (whether these are clearly set out by the designers of the game or by the players themselves while playing the game). This is however not to say that the framework cannot be applied to the experience of games which have no playable figure (eg

Tetris 1984) or to *non-games* which may have no clear rules and challenges (eg *Proteus* 2013). Such an analysis however lies beyond the scope of this paper and will be further analysed in future research.

Characteristics of Interactivity and Play

Core concepts of interactivity are looked at in great detail in Katja Kwastek's book *Aesthetics of Interaction in Digital Art* (2013). She states that these concepts of interactivity need not be exclusive to computer mediated interactive art, but also to other works with interactive elements. Söke Dinkla indeed states that 'the term interactive art serves as a category-specific designation for computer supported works in which an interaction takes place between digital computer systems and users' (Kwastek 2013: 4). This definition can be applied to digital games as well. Indeed, play can be considered as comparable to the characteristics of interactivity 'for action and contemplation are closely linked to play too' (2013: xxi).

One of the characteristic features of the experience of digital games, and interactive media in general, as opposed to 'traditional' media (Costello, Youngblood & Youngblood 2012) such as literature, film and television, is that they present an opportunity for the recipient to interact with the system, change its state and get immediate feedback to their actions. Espen Aarseth's definition of the word *ergodicity* from the book *Cybertext* (1997) is extremely helpful in relation to both digital games and interactive media in general. He uses the term ergodic to refer to a 'type of discourse whose signs emerge as a path produced by a non-trivial element of work' (Aarseth 1999: 32), as opposed to non-ergodic media, such as film, or a book, that do not allow the user to actively engage with it and modify its state. What recipients of non-ergodic media cannot do is configure the text (see Eskelinen 2001; Moulthrop 2004; Ryan 2001a). This ability to configure the text through play in digital games is argued to have an impact on the ability for players to self-reflect.

This section looks at various characteristics of ergodic media, linking these with various characteristics of play.

Actions and processes

Kwastek starts by stating that 'actions and processes, as opposed to (re)presentations, are the point of departure for this study' (2013: xvii) Non-coincidentally, action (through both the player and non-playable entities) and process are two of the characteristics which can be found in digital games as well. Indeed, the emergence of signs which happen in digital games happen through the players' participation, i.e. their action. Furthermore, the actions taken are what make interactivity in games inherently processual. A good distinction to make that solidifies digital games as processual is between the perception of game as object, or game as process. Indeed, according to Malaby (2007):

> One of the first things we must recognize is that games are processual. Each game is an ongoing process. As it is played it always contains the potential for generating new practices and new meanings, possibly refiguring the game itself (8).

Feedback

Kwastek also refers to cybernetic art when referring to feedback. She states that cybernetics as a science 'proclaims the importance of feedback processes as a general basis for life and technology' (2013: 7). Feedback is also an integral element of digital games. For every action taken by the player, the player in turn receives some form of feedback. Whatever the case, all games, including non-digital games present some form of feedback to the player. This also applies to traditional games such as I spy with my little eye, where a player's right or wrong answer may be considered feedback by the other player.[1]

Chance & Control

Two interrelated characteristics found in interactive works are elements related to chance and control. Randomness and unpredictability can be considered elements of chance which have been used in various ways in a number of interactive works.

A lot of digital games involve a great degree of chance as well, which is related to the play characteristic of inner infinitude, which Scheuerl relates to play's endless repetitions and variations. (Kwastek 2013: 76) However, even in games based on chance, players are arguably also presented with a system that has certain rules imposed on the player.[2] The mention of rules, as well as objectives in play and games was pointed out by a number of play theorists (see e.g. Huizinga 1949; Suits 1978; Salen & Zimmermann 2003), while Caillois (1961) goes as far as to create a continuum that exists in play, between paidia (free spontaneous play, unrestricted by rules) and ludus (gaming activities that involve specific rules the player has to follow to win).

Perception heightening

Kwastek moves on to a focus on motion and its perception through kinetic art (2013: 21). Kinetic art according to Frank Popper (1968), refers to a style which moves art into a realm of real movement (223). Kwastek describes the 'heightening of perceptual sensitivity' as the primary goal of kinetic art (2013: 24). Similarly, perceptual sensitivity can also occur through

[1] It has to be made clear at this point that there are certain games which challenge the notion of feedback, despite this being an integral element of interactive processes. Pippin Barr's *Complaining to a tree* (2014) and *Looking at Colours* (2014) are both examples of games that do not provide the player with concrete feedback. However, even in this case, the lack of feedback may still be considered as essential feedback in itself.

[2] For a more comprehensive discussion on rules in games, refer to Salen & Zimmermann (2003), who differentiate between operational, constitutive and implicit rules (130).

the action and movement in digital games. It can be argued that the heightening of perception while playing can make the players feel immersed and present in the game environment.[3] The heightening of perception in games happens through various audio-visual stimuli which aid in the feeling of presence that is associated with a feeling of non-mediation (Lombard and Ditton 1997), which happens when players stop noticing the medium when playing.[4] Concepts of immersion and presence have been studied widely in the field of digital games.

Self-perception

Another feature which Kwastek mentions in relation to video art is self-perception. The aim of these works is 'the mediatisation of the recipient's own image, temporal or spatial distancing often being used to stimulate self-reflection' (2013: 25). According to Krauss (1976: 52), when an audience member for instance sees him/herself on a screen in a video art installation, an illusion of a blending between subject and object takes place. Players can arguably see themselves in a number of ways when playing games. While digital games do not necessarily mediatize the actual physical image of the player in a game, they are still able to include various characteristics of the actual player. Certain games for instance allow for character creation, while other games allow players the possibility to include their own names. Furthermore, the fact that the game avatar responds to the inputs provided by the player might make the player feel as if the game avatar is a reflection of their own selves. Once again, a link can be made between self-perception and the feeling of self-presence, which looks at how players can feel as if their virtual self is their actual self.[5]

Virtual reality and simulated spaces

[3] Presence theory has been applied to players' experience of digital games and has been linked with a feeling of non-mediation. (See e.g. Lombard and Ditton 1997; Lee 2004, Tamborini and Skalski 2006; Steuer 1992) Non-mediation as a concept is related to Bolter & Grusin's (1999) theory of remediation who equate the feeling of non-mediation with a technology who becomes invisible / immediate / transparent to the user. Janet Murray describes immersion as 'the experience of being transported to an elaborately simulated place' (1997: 98) and is arguably facilitated through non-mediation. This is also related to the feeling of *absorption,* mentioned by Johan Huizinga (1949) in his definition of play.

[4] I would argue that various media, even non-ergodic have the capability to elicit this state of presence and immerse its receivers. For instance, according to Baudry & Williams (1974), cinema gives out an impression of reality through the viewer's identification with the camera, and this is solidified by the fact that when watching a film, the film process is generally hidden. In this sense, the viewer believes that what she sees on screen is what she is seeing through her own eyes. Spectators according to Baudry thus feel they are the authors of the text on screen, and in this sense, they are empowered. On a similar note, Metz (1982) shows how in cinema, spectators are really watching and perceiving through their own point of view, taking the place of the camera. Yet, Jean Mitry (1965) shows how 'the impressions called subjective are given to me, just like all the others [...] the camera conducts me, guides me; it communicates to me impressions that were not born from me' (67). The content made available to them is pre-written and cannot be altered. Similarly Vivien Sobchack (1992) states that when watching a movie filmed in a first person point of view 'the perception whose interest we share belongs always to another perceiving and embodied subject' (234). Thus what distinguishes the experience of ergodic and non-ergodic media remains the ability for receivers to *configure* the text.

[5] This echoes Marie-Laure Ryan (2001b) who describes one way of interactivity being internal, i.e. where a user (or player in this case) 'projects himself as a member of the fictional world, either by identifying with an avatar, or by apprehending the virtual world from a first person perspective' (n.p). Self-presence was also discussed in relation to embodiment in digital games (see e.g. Klevjer 2012; Nørgård 2011; Taylor 2002)

Another characteristic mentioned by Kwastek is that of virtual reality. She seems to link this subject very much with simulated spaces which computer applications can create, and which can be used in interactive media art applications. To link this to games, Huizinga mentions how play exists within its own boundaries of time and space. As an example, a game of football takes place within a football pitch. Similarly, a digital game takes place within its own boundaries in the virtual environment presented on screen. [6] The notion of simulated spaces can be defined as an imitation of some form of real-world process over time (Banks et al. 2001: 3). Indeed, all games arguably imitate some form of real world process.

Self-consciousness and subjective experience

Before delving into how the ergodic qualities of digital games can influence self-reflection, a thorough look at the phenomenological theory of consciousness needs to be established.

Pre-reflective consciousness

Edmund Husserl, who is considered to have established the school of phenomenology, is analyzed through Dan Zahavi's interpretation in *Subjectivity and Selfhood* (2005). In phenomenology, there seems to be an almost unanimous agreement regarding the existence of an implicit pre-reflective self-consciousness (Gallagher & Zahavi 2014).[7] Pre-reflective self-consciousness is a first-order awareness that is generally the foundation on which a second order reflective self-consciousness (or self-reflection) is then built. Quite simply, it can be seen as a general awareness we have of ourselves before we ever consciously reflect on our own subjectivity and experiences. Edmund Husserl, who equates human subjectivity with a 'mode of being aware of oneself' (1973), interprets self-consciousness as entailing a minimal or thin form of self-consciousness, which does not require any form of ego or an I-subject overlooking the experiences.

Husserl also believed that 'every act is consciousness of something, but there is also consciousness of every act' (1991: 130). Hence, every act of consciousness is intended (focused) towards something (e.g. an activity, thought etc) but we are also conscious of everything else that surrounds our senses.[8]

[6] According to Kwastek, (2013: 75), in a similar fashion to Huizinga, Scheuerl states that it is the temporal and spatial boundaries that create the structure of play, referring to this as the self-containedness of play. Similarly, Roger Caillois shows how play is separate in time and space. Kwastek also refers to self-containedness as one of the main features of play, and up to a certain extent of interactive art as well.

[7] For further reading on the subject, see e.g. Henry (1963), Merleau-Ponty (1945), Sartre (1956).

[8] Sartre similary makes a distinction between two types of pre-reflective self-consciousness. *Positional consciousness* or *thetic consciousness* refers to a conscious activity that 'asserts the existence of its object' (Cumming & Sartre 1965: 51). In this case, the person would be actively intended towards an external object, such as an activity the person would be doing. It has to be made clear that in this case, the person would be focused on the activity, not on herself doing that activity. *Non-positional consciousness* or *non-thetic consciousness* on the other hand simply involves an experience of the phenomena around the subject, without him/her paying any particular attention.

Reflective self-consciousness (Self-reflection)

Both Husserl and Sartre believe it is very possible for subjects to reflect about themselves as subjects, despite the fact that this reflection is not needed for the more basic and natural minimal form of pre-reflective consciousness. The object of consciousness in this case becomes the conscious activities lived through by the subject, and consequently the actual experiences lived before or at that time by the subject. Reflective self-consciousness is a second layer of consciousness that builds on pre-reflective consciousness, and refers to the ability for a person to make herself and her experiences the object of consciousness (Husserl 1970; Sartre 1956). The object of consciousness thus moves away from the activity, and becomes the same person's experience of doing that activity. For Husserl, (1984) reflection can happen the moment we 'direct our attention towards our experiences, and thereby take them as objects of an inner perception' (424).

With the ability that one has to reflect back on oneself and one's own experiences, one also has the ability to change certain aspects of their own lives, thus creating the possibility for *self-transformation*. 'The experiences reflected upon are transformed in the process, to various degrees and manners depending upon the type of reflection at work' (Zahavi 2005: 96). Indeed, Husserl lists a number of other benefits of self-reflection, including self-knowledge, self-evaluation, alteration, as well as the ability for the subject to distance itself from its own experiences and perceive them from an objective standpoint.[9]

Self-reflective consciousness in games

The experience of self-reflective consciousness can arguably also occur in the experience of digital games. It is important to point out for clarity's sake that the way in which people relate to themselves and their experiences as the objects of consciousness has already been analysed in games through the *double-consciousness* model (Salen and Zimmermann 2003) and the *player figure relation model* by Daniel Vella (2014).

Double-consciousness is described as a mental state which involves the players being 'aware of the artificiality of the play situation' (2003: p. 451), while also being conscious through the in-game figure in relation to the game world. This model implies that players are aware of the fact that they are playing a game at all times. The link of the double-consciousness model with phenomenology exists through Eugen Fink's article "The Oasis of Happiness" (1968). In it, Fink refers to a state called *double existence*. Both these terms describe an inherent

[9] The act of self-reflection is looked at as an objectifying and distancing procedure to some, and particularly to Von Herrmann in Hermeneutik und Reflexion. Kierkeergard also refers to the 'act of separation' and differentiation that happens between the self and its environment / external world (Hannay 2003: 155). In a very similar vein, both Moran (2001: 142-143) and Koorsgard (2009: 116) refer to self-reflection with a sense of distancing from one's own direct experience, while Koorsgard goes far as to show how self-reflection involves self-division, which is something that allows us to look at ourselves and experiences critically and objectively.

situation to any form of play where 'while playing, man retains a knowledge of his double existence, however greatly reduced this knowledge may be' (Fink 1968: p. 23).

The fact that players constantly have this knowledge of this seems to imply that the double consciousness inherent in play can be linked with the pre-reflective self-consciousness mentioned earlier. Yet, while a player 'retains a knowledge of his double existence', she is arguably also, phenomenologically speaking, making the game avatar and the game situation as an *object* of its own consciousness, which was seen earlier as a requisite for reflective self-consciousness.

To further add to this viewpoint, Vella's *player-figure relation model* (2014) analyses a phenomenological duality in play, which looks at how players can relate to the playable figure in a *subjective* or *objective* manner. [10] In the subjective mode of relation, the player feels she inhabits what Vella refers to as a *ludic-subject* position and identifies with the game avatar as 'I'. This is not to say that the player would feel she is the character within the game, but rather that the player feels her subjectivity stands in the game. This is the feeling typically associated with presence and immersion, mentioned in the first page of this paper as two theories that also analyse player experiences. [11] Conversely, in an objective mode of relation, the playable figure 'becomes itself present to the player as an object of perception' (p. 3). To summarize, 'the distinction is one of playing the figure [subjective] versus playing with the figure [objective]' (p. 3).

I will reiterate that reflective self-consciousness refers to the ability for a person to distance herself from herself, making its own subjectivity and experiences the object of consciousness. Arguably, in the objective mode of relation proposed by Vella, the player also starts seeing the playable avatar as a separate figure, thus making it (and ultimately the game situation) the player's own object of consciousness.

Both theories by Salen & Zimmermann and Vella discuss a mode of relation a players have with the avatar / character, and arguably, this seems quite synonymous with the experience of

[10] In players' experience of avatar-based games, Vella actually proposes that there are actually two dualities which one has to consider. The phenomenological duality which is looked at in this paper shows how the player can engage with the playable figure from an objective or subjective standpoint, while the ontological duality (not focused upon in this paper) looks at how the player can identify with the avatar as either self or other.

[11] A previous iteration of this paper (and subsequently the presentation) included a detailed reference to Maurice Merleau-Ponty's theory of the *body schema* (1962) to show how the otherwise mediated experiences generated by gaming technologies can become immediate to players. This is needed (although not directly significant to the scope of this paper) given that pre-reflective and reflective self consciousness have been originally analyzed in relation to humans' immediate experiences. The body schema can be used as a 'description of the intuitive understanding of one's own body and its position in space' (Bullington 2013: 31) representing a situation where our own body is immediately known to us in a pre-reflective manner. Briefly in his work, he accounts for situations in which we can incorporate tools and technologies into our own body schema. Arguably then, the game technology (which includes the game controller and the avatar) can become incorporated into players' own body schema, making the gameplay experience immediate to players, and thus relevant to this study.

reflective self-consciousness mentioned by Husserl and Sartre. Yet with both the objective mode of relation and double consciousness, it is not necessarily the case that players are reflexive of their experiences just because they are aware of the play situation and / or the playable figure. Indeed, I argue that both the objective mode of relation as well as double consciousness can be discussed in relation to a pre-reflective consciousness as well. Both these theories look at how we relate to the play situation (double-consciousness) and the playable figure (objective mode of relation), but do not delve into how these have a bearing on reflection per se.

Yet, it seems reasonable to discuss the act of reflective self-consciousness during play in relation to an objective mode of relation, as this can only happen through the player's (not an artificial character's) subjectivity. Furthermore, as players become reflective, I argue that they must be aware of not only the playable character and the play situation, but naturally also of their own subjectivity. The aim of this paper is to build on these theories, showing how reflection and transformation *can* then take place once players adopt these perspectives.

The self-reflection that can occur as players become aware of themselves and the playable figure can also lead to self-transformation that influences the way a player plays that particular game. For instance, in *Papers, Please* (3909 LLC 2013) players take on the role of an immigration officer who has to decide (on a number of variables) whether to let immigrants in the country or not. Needless to say, some of the decisions taken by the player can be tough. In this case, players are able to reflect on their decisions, and how these possibly represent their values as human beings.

Self-reflection beyond subjectivity

The self-reflection mentioned so far however has not considered the fact that players have the ability to configure the text given to them. Indeed, as shown earlier, the feeling of non-mediation is not restricted to ergodic technologies, implying that self-reflection as so far explicated, can also happen in the reception of non-ergodic media. However, the processual nature of play that is absent in non-ergodic media can arguably enhance the type of self-reflection players experience.

Narrative identity and self-reflection

In order to analyse this proposed framework of self-reflection in digital games, it is helpful to first look at hermeneutic philosopher Paul Ricœur's discussion on *narrative identity* (1990; 1992). It is argued that a study of self-reflection in games based on an application of the hermeneutic concept of the narrative identity is dependent on the temporal, processual nature of digital games, as well as their ability for configuration, making this phenomenological approach better suited to experiences generated through interactive media technologies.

Paul Ricœur has argued that issues related to selfhood and personal identity cannot be viewed in abstraction, but rather must consider the temporal dimension of human existence (Ricœur, 1992: 138). Ricœur's approach thus calls for a narrative understanding of self that is built on temporality, and our interactions with what is other to us (including other people, as well as situations we find ourselves in).[12] Self-identity within this framework thus becomes a temporal process, while narratives 'constitute the phenomenological unity of consciousness over time' (Schechtman 2007: 167).

The temporal process of narrative also shows how self-identity is a dialectical process. Indeed, in a narrative identity, there is an 'interaction of a self that maintains an identity of constancy with a self that projects itself into the future and commits itself to change and transformation' (Van Den Hengel 2002: 84).[13]

Furthermore, according to the narrative approach to the self, the way subjects live their lives will influence other subjects' narratives, while other subjects' narratives will have an effect on our own definition of who we are. Indeed, 'when I interpret myself in terms of a life story, I might be both the narrator, and the main character, but I am not the sole author' (Zahavi 2005: 109). The other is also not limited to interaction with human beings. According to Ricœur (1969), selves are built up in the process of assimilating, interpreting, and integrating contents of the cultural environment.

Arguably, ergodic media, including digital games, easily allow for the two forms of reflective self-consciousness mentioned:

a. As exemplified earlier, a player might become reflective on her own subjective experiences, thus making herself and her experiences the object of consciousness.

b. Self-reflection may also be built around a player's actions and feedback s/he receives in an environment. These can trigger a change in a player's selfhood. These interactions are enabled through both the processual (time-based) nature of games and in the relationship with the elements other to the player. This aspect is based on the theory of the narrative identity.

[12] Playing through a virtual environment gives players the opportunity to be in situations that they might have never been in before. These could be simulated spaces such as battlefields, a haunted forest, racing tracks, or an American city in the 1940s. They could also be the abstract spaces presented in games like *Tetris*. Whatever the virtual environment represents, the situations players find themselves in in games are sometimes very different from what they experience in real life.

[13] This dialectic is better explained by looking at two types of identities, which Ricœur deems as sameness (*idem*-identity) and selfhood (*ipse*ity). Idem-identity involves a subject's permanence over time. (Ricœur 1992: 2) This can be looked at as the unchanging core of personality, as well as our physical being, which despite changing over time, always has a constant set of permanent features. Ipse-identity is however not fixed, and is in a constant state of flux. Indeed, the question 'who am I?' according to Ricœur, can never be properly answered, as it represents a facet of identity that is constantly fluctuating based on our surrounding elements, which makes it connected to time.

The first aspect deals with the previous analysis, which shows how while interacting with digital games, players might become aware of themselves outside the game, putting themselves and their experiences as the object of consciousness. This can be triggered by the design of the game itself which can aim to break immediacy, a player's body schema relations, a glitch in the game, or simply a random thought that puts the player in a self-reflective state.

However, while the analysis earlier can fit within the realm of self-reflection in both interactive media and even passive media, the hermeneutic study of the narrative identity, and the self-understanding / reflection it can elicit, provide an additional layer to self-reflection that is arguably better suited vis–à–vis the affordances created by ergodic media, including digital games.

It is argued that while recipients of any media text can be triggered to self-reflect, ergodic media also allow users to reflect on the situations they find themselves in, their actions, the feedback they receive and their ability to act within the medium. This is very much in line with the narrative identity theory by Ricœur which also builds itself through a process that evolves over time.

Furthermore, the result of the actions taken as well as the self-reflective acts while gaming is that players can have a self-transformative experience that is not triggered merely by being voyeurs into another entity's actions, or by taking their subjective position, but rather triggered by looking at one's own actions and decisions taken in the game.

The analysis of self-reflection in digital games based on the theory of narrative identity is thus looked at in the following manner:

a. A player finds herself in virtual situations that are *other* to the player. The situation might be new for the player, and this arguably allows for a pre-reflective positional consciousness or self-reflection,

b. An action is taken based on the decision of the player,

c. Some form of feedback is given to the player,

d. Once feedback is received, players might reflect on the outcome of the decision they had taken,

e. Self-transformation may occur, resulting in a change in the ipse state of the player.

The argument being made here is that the situations a player finds herself in may require a different or new way of thinking for the player, thus opening the possibility for reflective self-consciousness.[14] I argue that 'situations' does not necessarily refer to the story (if any) of a game, but also to the rules of the game which the players have to learn and follow. Digital games also provide feedback to the player's actions. When feedback is given in response to a player's actions, a player may arguably choose to evaluate the result of the action vis–à–vis the actual decision taken. If the player decides to do so, then once more she involves herself in a process of reflection. When a player is reflecting on the feedback given, it may be argued that what is essentially happening is that the previous selfhood (*ipse*) of the player is being evaluated. Once this evaluation is done, a player can transform his selfhood.

Self-transformation

At this stage, a link can be made between the narrative concept of the self with Husserl who states that reflective self-consciousness can allow a human being to transform[15] their beliefs and lives. Indeed, Gualeni (2014) mentions how 'play provides a safe 'possibility space' to shape one's own sense of identity and possibility.'

Barab et al. (2010) develop a theory of transformational play applied to education in their study Transformational Play: Using Games to Position Person, Content, and Context. What is interesting here is that they do not necessarily equate playing a game with transformation. Indeed, as mentioned before, a player need not reflect when taking certain decisions. Similarly, a player might not transform if she does not reflect when receiving feedback. In their definition of transformational play, they state that:

> Playing transformationally involves (a) taking on the role of a protagonist (b) who must employ conceptual understandings (c) to make choices (d) that have the potential to transform (e) a problem-based fictional context and ultimately (f) the player's understanding of the content as well as of (g) herself as someone who has used academic content to address a socially significant problem' (526).

This last definition is quite comprehensive, and once again it very much reflects the way self-reflection has been applied in this chapter vis–à–vis the narrative approach to the self. What's interesting about this definition is that the choices players make have the potential to transform 'the player's understanding of the content as well as of herself.' This implies that the transformation may not simply happen on the fictitious protagonist, but also on a player's selfhood, thus having an impact on the person's life outside the game.

[14] It needs to be made clear that while the proposed analysis of self-reflection can be applied to all digital games, certain digital games are more likely to allow for reflective self-consciousness triggered by the situation the player finds herself in. Arguably, games that inform the player about what she should be doing every step of the way, allow for less self-reflection than games which provide players with a set of choices to make.

[15] To further address self-transformation, it is worth reading Murray (1997) and Michael Mateas's (2006) concept of personal transformation, as well as the theory of transformational play by Barab et al. (2010).

Conclusion

Barab et al. later on in the same article, point out how being immersed can be a great determining factor towards transformational play. Immersion has been looked at vis–à–vis issues related to subjective experience earlier on, thus showing how a link can be established between the study of self-reflection in both subjectivity and selfhood. The self-reflection experienced in a digital game can thus be useful for players beyond the experience of a game, as it can lead towards the transformation of a player's life and experience both within the game, and more importantly, outside of it.

The results hopefully further establish how digital games can be considered not merely entertainment products whose aim is to solely entertain, but also powerful tools for self-exploration and personal development. Future studies may wish to elaborate on this study by exploring how different characteristics of games can have varied impacts on the experiences of self-reflection. Furthermore, it would be very interesting to see how this theory can be applied in practice.

Games

BATMAN: ARKHAM, ASYLUM. Warner Bros. Interactive Entertainment, PC, 2009.
COMPLAINING TO A TREE. Pippin Barr, Browser Game, 2014.
LOOKING AT COLOURS. Pippin Barr, Browser Game, 2014.
PAPERS, PLEASE. 3909 LLC, PC, 2013.
TETRIS. Nintendo, 1984.
THE STANLEY PARABLE. Galactic Cafe, PC, 2011.

References

Aarseth, E. (1997) *Cybertext*. Baltimore MD: Johns Hopkins University Press.

Aarseth, E. (1999) 'Aporia and Epiphany in Doom and the Speaking Clock: Temporality in Ergodic Art.' In M. Ryan (ed.). *Cyberspace Textuality*. Bloomington USA: Indiana University Press.

Barab, S., Gresalfi, M. &Ingram-Goble, A. (2010) Transformational Play: Using Games to Position Person, Content, and Context. *Educational Researcher*, 39(7), pp.525-536.

Baudry, J. & Williams, A. (1974) Ideological Effects of the Basic Cinematographic Apparatus. *Film Quarterly*, 28(2), pp.39-47.

Bogost, I. (2007) *Persuasive games*. Cambridge, MA: MIT Press.

Bolter, J. and Grusin, R. (1999) *Remediation*. Cambridge, MA: MIT Press.

Bullington, J. (2013) *The expression of the psychosomatic body from a phenomenological perspective*. Dordrecht: Springer.

Caillois, R. (1961) *Man, play, and games*. New York: Free Press of Glencoe.

Calleja, G. (2011) *In-Game: From Immersion to Incorporation*. Cambridge, MA: MIT Press

Costello, V., Youngblood, S. & Youngblood, N. (2012) *Multimedia foundations*. Waltham, MA: Focal Press, p.14.

Cumming, R.D. & Sartre, J. (1965) *The Philosophy of Jean-Paul Sartre.* New York: Vintage Books.

Eskelinen, M. (2001) The gaming situation. *Game Studies,* 1 (1). Available from: http://www.gamestudies.org/0101/eskelinen/. [Accessed 11 Jun. 2016].

Flanagan, M. (2009) *Critical play*. Cambridge, MA: MIT Press. p.1.

Gallagher, S. & Zahavi, D. (2014) Phenomenological Approaches to Self-Consciousness. *Stanford Encyclopedia of Philosophy.* Available from: http://plato.stanford.edu/entries/self-consciousness-phenomenological/#BodSelAwa. [Accessed 11 Jun. 2016].

Gualeni, S. (2013) Self-reflexive video games as playable critical though. In: *Gamasutra* [Online]. Available from: http://www.gamasutra.com/blogs/StefanoGualeni/20131029/202847/SELFREFLEXIVE_VIDEO_GAMES_AS_PLAYABLE_CRITICAL_THOUGHT.php. [Accessed 11 Jun. 2016].

Gualeni, S. (2014) Freer than we think: Game Design as a liberation practice. *Proceedings of Philosophy of Computer games conference 2014, October 13 – 15.* Istanbul, Turkey.

Hammar, E. (2013) Post Phenomenological Play. *Proceedings of Philosophy of Computer games conference 2013, October 2 - 4 2013*. Bergen, Hordaland.

Hannay, A. (2003). *Kierkegaard and philosophy*. London: Routledge.

Henry, M. (1963) *L'essence de la manifestation*. Paris: PUF.

Huizinga, J. (1949) *Homo Ludens: A study of the play element in culture.* London: Routledge and Kegan Paul.

Husserl, E. (1970) *Logical investigations*. Translated by J.N. Findlay. London: Routledge and Kegan Paul.

Husserl, E. (1973) Zur Phänomenologie der Intersubjektivität. Texte aus dem Nachlass Dritter Teil: 1921-1928. In: Husserliana Vol 14. The Hauge: Nihjoff.

Husserl, E. (1984). *Einleitung in die Logik und Erkenntnistheorie*. In: *Husserliana. Vol XXIV.* The Hague: Nijhoff.

Husserl, E. (1991) *On the Phenomenology of the consciousness of internal time* (1893-1917). Translated by J. Barnett Brough. Dordecht, Kluwer Academic.

Klevjer, R. (2012) Enter the Avatar. The phenomenology of prosthetic telepresence in computer games. In Fossheim, H., Mandt Larsen, T. and Sageng, J. R. (eds.) *The Philosophy of Computer Games.* London & New York: Springer. pp. 17-38.

Korsgaard, C. M. (2009) *Self-Constitution: Agency, Identity and Integrity.* Oxford, Oxford University Press.

Kwastek, K. (2013) Aesthetics of interaction in Digital Art. Cambridge, MA: MIT Press.

Lee, K. M. (2004) Presence, explicated. Communication Theory, 14(1), pp.27-50.

Lombard, M. & Ditton, T. (1997) At the heart of it all: The concept of presence. *Journal of Computer-Mediated communication,* 3 (2).

Malaby, T. (2007) Beyond Play: A New Approach to Games. *Games and Culture*, 2(2), pp. 95-113.

Mateas, M. & Stern, A. (2006) Interaction and Narrative. In: Zimmermann, E., & Katie, S. (eds.) *The Game Design Reader: A Rules of Play Anthology.* Cambridge, MA: MIT Press. pp. 642-669

Merleau-Ponty, M. (1962) *Phenomenology of Perception*. Translated by C. Smith. New York and London, Routledge.

Metz, C. (1982) *The imaginary signifier*. Bloomington: Indiana University Press.

Mitry, J. (1965) *Esthétique et psychologie du cinéma.* Vol. 2. Paris, Editions Universitaires.

Moulthrop, S. (2016) *From Work to Play | Electronic Book Review*. [online] Electronicbookreview.com. Available from: http://www.electronicbookreview.com/thread/firstperson/molecular [Accessed 11 Jun. 2016].

Moran, R. (2011) *Authority and Estrangement: An essay on Self-Knowledge.* Princeton, Princeton University Press.

Murray, J. (1997) *Hamlet on the Holodeck*. Cambridge, MA: MIT Press.

Popper, F. (1968) *Origins and development of kinetic art*. Greenwich, Conn: New York Graphic Society.

Ricœur, P. (1969) Existence et Herméneutique. In: Ricœur, P. *Le Conflit des interprétations*. *Essais d'herméneutique I.* Paris: Seuil.

Ricœur, P. (1990) *Time and Narrative. (Vols. 1-3)* Translated from French by K. Mc Laughlin & D. Pellauer. Chicago, University Of Chicago Press.

Ricœur, P. (1992) *Oneself as another*. Chicago, University of Chicago Press.

Ryan, M. (2001a) *Narrative as virtual reality*. Baltimore, MD: Johns Hopkins University

Press.

Ryan, M. (2001b) Beyond Myth and Metaphor* -The Case of Narrative in Digital Media.*Game Studies.* 1 (1). Available from: http://www.gamestudies.org/0101/ryan/. [Accessed 11 Jun. 2016].

Salen, K., & Zimmerman, E. (2003) *Rules of play: Game design fundamentals*. Cambridge, MA: MIT Press.

Sartre, J. (1956). *Being and nothingness*. New York: Philosophical Library.

Schechtman, M. (2007) Stories, Lives and basic survival: A defense and refinement of the narrative view. In: Hutto, D. (ed.) *Narrative and Understanding Persons.* Cambridge, Cambridge University Press.

Sobchack, V. (1992) *The address of the eye*. Princeton, N.J: Princeton University Press.

Steuer, J. (1992) Defining Virtual Reality: Dimensions Determining Telepresence. *Journal of Communication*, 42(4), pp.73-93.

Suits, B. (1978) *The Grasshopper*. University of Toronto Press: Toronto.

Tamborini, R. & Bowman, N. (2010) Presence in Video Games. *Immersed in media: Telepresence in everyday life*, pp. 87-104.

Tamborini, R., & Skalski, P. (2006) The role of presence in the experience of electronic games. In Vorderer, P. & Bryant, J. (eds.) *Playing Video Games: Motives, responses, consequences.* Mahwah, NJ: Lawrence Erlbaum. pp. 213 - 224.

Taylor, T.L. (2002) Living Digitally: Embodiment in Virtual Worlds. In: Schroeder, R. (ed.) *The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments*. London, Springer-Verlag. pp. 40 - 62.

Van Den Hengel, S.C.J. (2002) Can there be a science of action? In: Cohen, R.A. & Marsh, J. L. (eds.) *Ricœur as Another.* New York: State University of New York Press. pp. 71 - 93

Vella, D. (2014), Player and Figure: An analysis of a Scene in Kentucky Route Zero. *Proceedings of the 2014 International DiGRA Nordic Conference, May 29, 2014.* Gotland, Sweden, .

Zahavi, D. (2005) *Subjectivity and selfhood*. Cambridge, MA: MIT Press.