Mechanics as Meaning: Examining Ludic Forms of Representation in Contemporary Video Games

Catherine Canning

A research paper submitted to the University of Dublin, in partial fulfilment of the requirements for the degree of Master of Science Interactive Digital Media.

2014

Declaration

I declare that the work described in this research paper is, except where otherwise

stated, entirely my own work and has not been submitted

as an exercise for a degree at this or any other university.

Signed:

_____

Catherine Canning
27/2/2014

Permission to lend and/or copy

I agree that Trinity College Library may lend or copy this research paper upon request.

Signed:

_____

Catherine Canning
27/2/2014

Acknowledgements

I would like to thank my supervisor Marguerite Barry for her guidance and support throughout the researching and writing process. I would also like to thank Glenn Strong and the other lecturers on the Interactive Digital Media course for their enthusiasm and commitment to the course's students. Finally, thanks should go to Josef for being a constant source of love and support.

Abstract

This research paper examines how game mechanics and game rules perform representational functions in contemporary video games. A definition of game mechanics is advanced based on Sicart's (2008) 'object-oriented' notion of mechanics as "methods invoked by agents, designed for interaction with the game state" (ibid.). This definition is then applied in qualitative analyses of three recently published video games - Lucas Pope's *Papers, Please* (2013), Yager's *Spec Ops: The Line* (2012), and Richard Hofmeier's *Cart Life* (2011) - in order to examine different aspects of the interaction of games' ludic elements and their representational or ideological goals. The research is conducted with aspirations to both contribute to the existing literature on gameplay and representation and to encourage critical awareness of game mechanics and rules as objects of meaning-making in the game design process.

Table of Contents

Table of Illustrative Material

Chapter 1 – Introduction

Scholars and game designers are increasingly aware of the potential of video games to examine and critique real world systems (Bogost, 2007, Flanagan, 2009, Myers, 2003, Frasca, 2003b). Games like The Fullbright Company's *Gone Home* (2013), the story of a young woman in mid-nineties America coming to terms with her sexuality in a socially conservative environment, and Frasca's *September 12th: A Toy World* (2003), an examination of civilian casualties in the War on Terror, ask players to use game mechanics to directly engage with the rules of systems that are intended to serve as microcosms of their real-world counterparts.

This research paper asks to what extent game mechanics and game rules can perform representational functions. That is, to what extent mechanics and rules themselves have a semiotic structure distinct from a game's other representational forms. There is a long history of critical engagement with games, both analogue and digital (Huizinga, 1949, Caillois, 1961). However, there has been comparatively little written about methods for the structured application of understandings of game rules and mechanics to qualitative analyses of video games. Analyses of games often focus on game mechanics in a purely functional manner while attributing representational functions solely to the game's audio-visual elements or narrative (Frasca, 2003b). Other criticism obscures the boundaries between mechanics and non-ludic representational elements such as cinematics, visual aesthetics and audio or focuses on the end result of this synthesis to the detriment of how the disparate elements work together to create it. This research paper therefore concerns itself less with what than how: the ideological or aesthetic assumptions of the works discussed give way to a consideration of how these semiotic structures are created and maintained.

The research paper begins with a consideration of what game mechanics and game rules are, arriving at a definition proposed by Sicart (2008). It then examines the previous literature surrounding games, meaning and representation, with a particular focus on Frasca's (2003b) distinction between representation and simulation, Bogost's (2007) notion of "procedural rhetoric", and Juul's (2005)

algorithmic ontology of games. These methodological perspectives are then used to define a methodology that is employed in the qualitative analyses of three recently published video games: Lucas Pope's dystopian passport inspection simulator *Papers, Please* (2013), Yager's self-consciously subversive military shooter *Spec Ops: The Line* (2012), and Richard Hofmeier's retail simulator *Cart Life* (2011). The research paper intends to show that uniquely ludic means of meaning-making are not only possible, but already realised.

The topic in question was chosen not only because of the paucity of directly relevant research, but also because of the author's interest in encouraging game design which demonstrates a critical awareness of the potential of game mechanics and rules as forms of representation. This concern with the values embedded in mechanics has been brewing in games journalism and online games criticism for some time; for example, much of the criticism directed at Irrational Game's *BioShock Infinite* (2013), a fantastical first-person shooter take on American exceptionalism, concerned the contrast between the game's ambitious themes and its disappointing commitment to the gratuitous violence almost ubiquitous in its genre (Barham, 2013). It is hoped that the research paper will foster an awareness of the viability of a careful attention to mechanics as a design strategy.

Chapter 2 - Literature Review

What are game mechanics?

Although the term 'game mechanics' is widely used by both game designers and critics, there has been comparatively little written on its meaning. It is often conflated, if not outright confused, with the notion of 'game rules'. This is an immediate problem for any qualitative game analysis that relies on an understanding of game mechanics and rules as distinct phenomena. The following will examine some previous attempts to define these terms in the literature. I hope to arrive at an understanding of game mechanics (and game rules) that best befits the fundamentally algorithmic nature of games, particularly video games. As Salen and Zimmerman (2004) and Sniderman (2006, p. 499) have argued, games are systems, and it is through working with this notion of systematicity that we can best understand the interesting ways games explore complex real-world social, economic and hegemonic systems.

Björk and Lundgren (2003) define a game mechanic as "any part of the rule system of a game that covers one, and only one, possible kind of interaction that takes place during the game, be it general or specific." Mechanics are thus simply the totality of game rules that allow for interactivity. It is not clear from this atomistic definition who is interacting, although the examples of mechanics offered - trading, bidding, negotiation, storytelling, roll and move, and role-playing - imply interaction on the part of players.

Another possible problem with this definition lies in its eagerness to construe mechanics as a subset of rules. It is true that mechanics are related to rules, but it is more helpful to think of this relationship as one of constraint rather than containment. Mechanics are therefore akin to single instances of specific player actions constrained by game rules. For example, in Team Meat's platforming game *Super Meat Boy* (2010), the player navigates through levels and avoids obstacles by carefully timing jumps.

Jumping is a mechanic, but the trajectory, distance, height and speed of the player's jumps are determined by the rules associated with the chosen player character.

Järvinen elaborates further on this distinction between mechanics and rules (2008, pp. 250-255). Mechanics cannot exist without rules, as they serve to make "a particular set of rules available to the player in the form of prescribed causal relations between game elements" (ibid., p.254). Järvinen arrives at a definition in which game mechanics are "one possible or preferred or encouraged means with which the player can interact with game elements as she is trying to influence the game state at hand towards attainment of a goal" (ibid., p. 255). That game mechanics would serve to embody preference is a novel, if somewhat unnecessary, inclusion. The definition works well without the adjectives bolted on to as descriptors of "means", and such a modified definition also accords better with instances where the player has only one way of interacting with a particular game element.

Sicart (2008) argues that Järvinen's definition, with its emphasis on goals, is deterministic. After all, some games, like EA's life simulation game *The Sims* (2000), or Ed Key and David Kanaga's 3D open-world exploration game *Proteus* (2013), appear to have no clear goals. However, it is simplistic to assume that goals have to be set by game designers, and indeed one of the allures of simulation games like *The Sims* is their willingness to cede control over the destinies of characters to players. That said, it remains the case that not all mechanics are goal-oriented. Some are included purely for novelty or entertainment, like the ability to turn on the radio and switch between stations while in a vehicle in the *Grand Theft Auto* series, or the taunts common to many fighting games. Järvinen's definition unduly emphasises the mechanics integral to in-game progression (usually referred to as 'core mechanics') and is thus not nearly broad enough for the purposes of this study.

Sicart himself (2008) provides one of the most thorough attempts in the literature to define game mechanics for the purposes of game analysis. Borrowing terminology from object-oriented computer programming and making use of the same ontological rules/mechanics distinction emphasised by Järvinen, he argues that "game mechanics are methods invoked by agents for interacting with the game world, as

constrained by rules" (ibid.). Simply put, game mechanics are actions that can be called upon by any of the various actors, be they human or artificial intelligences, within the game space. And, since actions are verbs, we can describe game mechanics using them; for example, Sicart enumerates the game mechanics in Team ICO's action-adventure game *Shadow of the Colossus* thusly: "to climb, ride (the horse), stab, jump, shoot (arrows), whistle, grab, run (and variations like swim or dive)" (ibid.)

Sicart (2008) goes on to argue that this formalisation of mechanics offers three advantages over those hitherto advanced. The first of these is an end to the "implicit anthropocentrism" that he claims has beset previous discussions on game mechanics (ibid.). By defining mechanics in terms of 'agents', which may be human or nonhuman, it becomes easier to analyse the roles of non-player characters (NPCs) within the game system. A distinction can also be made between NPCs with access to mechanics and those without. The definition thus accords well with the increasing acknowledgement of the roles of digital 'actors' in crafting engaging player experiences (Warpefelt, Strååt, 2013).

Secondly, the definition allows for the mapping of mechanics to input devices (e.g. controllers, mouse and keyboard, and so on). This is particularly useful in analysing games in which a single mechanic is triggered by multiple button presses, as it allows us, for example, to document instances of complicated sequences of button presses in terms of muscle memory (Sicart, 2008). For the purposes of this research paper, it may be useful to distinct mechanics with relatively simple input triggers from those with more complex ones for the purposes of comparison.

Finally, Sicart (2008) argues that his definition is particularly apt to describe contextual mechanics - i.e. "mechanics that are triggered depending on the context of the player presence in the game world". However, it is not immediately clear why such a definition serves an understanding of contextual mechanics any better than the competing ones. It is true that Järvinen is overly concerned with goals, but contextual mechanics are in fact particularly amenable to being analysed in terms of goals since they often appear as a temporary means of player progression. I am thinking particularly of so-called 'mini-games', small instances of games within

games with their own unique mechanics that are often used as obstacles to player progress. For example, in Squaresoft's role-playing game *Final Fantasy X* (2001) players are required to visit temples and pray to obtain aeons, sacred beasts of great power, in order to advance the game's story. Navigating through these temples usually involves solving puzzles that often feature mechanics not available to the player-character during the course of normal gameplay, such as the ability to move blocks around.

Sicart (2008) also provides a definition of 'core mechanics', a term often used in the literature but rarely clarified. Core mechanics are "the game mechanics (repeatedly) used by agents to achieve a systemically rewarded end-game state" (ibid.). For example, in a first-person shooter game shooting is a core mechanic, since the player will use it again and again in order to advance toward the game's end state.

Sicart's (2008) definition is the most thorough in the literature and so it was determined that it would be the most appropriate for the purposes of the research to be conducted. However, it may need to be modified or expanded on to accommodate certain mechanics.

Games, meaning, and representation

The issue of how games create and represent meaning has received increased attention as video games become an ever more mainstream cultural phenomenon (Mäyrä, 2008). Questions around representations of ideology, gender, race, disability and sexuality are at the forefront of contemporary games criticism. Yet much research focuses on games solely as extensions of literature or film, harking back to the much-maligned 'interactive fiction' label so beloved of games researchers at the turn of the century. Malliet (2007) has found that only minimal attention has been paid to "the role of video game content as a moderating variable" in studies of video games undertaken by media effect theorists. For example, Jansz and Martis' (2007) quantitative analysis of the prevalence of what they term 'the Lara phenomenon', the supposedly anomalous appearance of competent female protagonists in video games,

focuses solely on the opening cinematics of twelve games without regard to the actual game worlds with which players interact or the mechanical means of this interaction.

Such concerns are not new to games researchers. At the turn of the century, an argument regarding the credentials of video games threatened to derail the methodological focus of the still nascent field of games studies. In one camp were the narratologists, those who saw games as a novel and potentially transformative new narrative medium; in the other, the ludologists, who located games within the broader field of traditional games and emphasised their peculiarly ludic qualities (Frasca, 2003a). Since then, the very games theorist who popularised the term 'ludology' has described this theoretical disagreement as "a debate that never took place" (ibid.). He has also noted that many of the scholars often identified as narratologists have rejected the label (Ryan, 2002, Jenkins, 2003, Mateas, 2002.) All but radical ludologists now agree that games can contain narrative elements, even if these elements should not be the game researcher's primary object of study.

Bizzochi (2007) and Frasca (2003a) argue that the ludology/narratology controversy was exacerbated by the tendency of certain scholars to conflate the terms 'narrative' and 'story'. Bizzochi goes on to argue that other "parameters of story" may be more relevant to game content analysis, such as characters, the fictional world in which the game takes place, emotions, and what he terms "micro-narratives", localised instances of narrative progression through gameplay (2007, p. 1). These may be the successful completion of game missions, or in-game events analogous to setpieces in film. To Bizzochi, micro-narrative events are important objects of study because they help bridge the gap between the narratological and ludological strands; gameplay becomes the means through which narrative progression is accomplished (ibid., p. 8). Like Sicart's (2008) emphasis on non goal-oriented mechanics, such an argument draws our attention to gameplay functions which are not intended to be ends in themselves, and accords well with theoretical frameworks that make claims about how games craft engaging worlds and systems, such as those discussed below.

I contend, following the ludological tendency, that an analysis of representation in games cannot be reduced solely to an analysis of game narrative, imagery, text or audio. Instead, what is needed is a methodology that acknowledges the game rules and mechanics that delimit players' experiences within game worlds as (themselves) types of representational systems. This section explores some theoretical paradigms for 'ludic representation' in the existing literature, focusing particularly on Frasca's (2003b) distinction between representation and simulation and Bogost's (2003) account of what is termed "procedural rhetoric" in the context of persuasive games. I am using the term "representation" in a somewhat broader sense than that afforded to it by Hall (1997, p. 16), who describes it as simply "the production of meaning through language" (where the term "language" encompasses both language in the traditional sense and what we may term visual language, the language of imagery). Instead, the term "representation", within the context of this research paper, should be understood according to Bogost's (2007, p. 9) notion of "procedural representation", which substitutes "language" for "processes" in Hall's definition.

Frasca's (2003b) discussion of game semiotics distinguishes between the representational structure of traditional narrative forms and what he calls the 'simulational' structure of video games. Responding to narratological claims that video games are extensions of narrative and thus representational, he argues instead that their fundamental semiotic character is simulational; that is, they function as models of existing systems, whether physical, cultural or ideological (ibid., pp. 221-228). Chaplin and Ruby (2006) similarly contend that video games employ models in place of the descriptions used by narrative media (Bogost, 2007, p. 257).

Interpreting video games as simulational allows for a more nuanced understanding of the relationship between games and meaning. While narrative media are largely static, simulational media must be understood phenomenologically; that is, in terms of how they are played or performed. It also affords a greater understanding of the role of game designers, who Frasca terms 'simauthors', in crafting engaging player experiences. While traditional authors generally afford their audience some degree of narrative certainty, at least in pre-modernist texts, the simauthor is free to reward

competent players the satisfaction of victory or craft different narrative fates entirely dependent on player actions.

However, it should be noted that, at least for the purposes of this research paper, simulations and representations are not mutually exclusive. Simulations represent, and although they do so in a way peculiar to their semiotic structure, an analysis which acknowledges their potential as multifarious sign generators must also acknowledge that all simulations simulate *something*. Frasca's definition - "to simulate is to model a (source) system through a different system which maintains (for somebody) some of the behaviors (*sic*) of the original system" - suggests as much (2003b, p. 223). Hall (1997) notes the function of language and mental imagery as systems of representation - that is, systems which consist of "different ways of organizing, clustering, arranging and classifying concepts, and of establishing complex relations between them" (ibid., p. 17). Elsewhere, Myers (2003) argues that video games are "rooted in a distinct representational form" - what one might, following Hall, call a system of representation.

In addition, simulation does not *replace* representation. In Frasca's example, a flight simulator not only models the behaviour of an aircraft in flight, but also retains the audiovisual characteristics of said aircraft. This is not, however, to say that simulation is simply mimesis, nor would we want it to be. As Atkins (2003) argues, the lure of simulations sometimes lies precisely in their 'gameness':

> When flames run back from the nose of the plane we feel no heat; when we throw the plane into too tight a turn the screen might go blank to represent blackout at high- G, but we feel none of the pressure on our bodies, we experience no equivalent level of nausea. It is only a game – which is why we play. To play combat flight sims with the expectation that one might really die, or even be fooled for the moment that we might die, would severely limit its appeal. It would certainly take the 'fun' out of the experience (ibid., p. 139.)

Frasca's insistence on simulation as an alternative to representation suggests a certain perceived limitation of the power of traditional representational forms, along with

perhaps an overconfidence concerning the potential of simulation. It is telling of his approach to traditional fiction that he roots his examples of narrative fate in two giants of the pre-modernist literary canon, *Oedipus Rex* and *Anna Karenina*. This seems to stem from the very confusion between story and narrative that he has accused those in the ludology/narratology debate of committing. It is true that traditional storytelling media generally deal with determinate sequences of events with more or less determinate consequences. However, this is to ignore *how* these sequences of events - these stories - are told. Much of the work of representation in traditional media happens in what is said (or communicated - representation is form-agnostic) obliquely or metaphorically, barely said or not said at all. I will later argue that this is also the case in games.

Bogost (2007, p. 3) contends that games educate and persuade through players' interaction with game rules and systems, a practice he terms "procedural rhetoric". Interpreting games that employ procedural rhetoric, or indeed employing procedural rhetoric in a game design, entails "procedural literacy", an ability to "craft and understand" procedural rhetorics ultimately reducible to "arguments mounted through unit operations represented in code" (ibid., p. 258). Bogost's emphasis on crafting and understanding suggests that the argument is intended to have repercussions for both game design and game content analysis. He also emphasises the representational qualities of procedurality, describing it, following Murray (1997), as a type of representational mode that is performed by *processes*, not language or imagery (Bogost, 2007, pp. 5-9)

Juul (2005) further elaborates on the algorithmic nature of games. According to his ontology, games are "rule-based systems" defined by their gameplay, the interaction between rules and player actions. Many games employ fictional worlds (e.g. the *Grand Theft Auto* series), while others are purely abstract (e.g. *Tetris*). Those that do employ representation are said to be "half-real", in that game rules really do exist but in-game actions take place only in the fictional world (ibid., p. 163). Juul emphasises the difficulty of reconciling these two elements; rules and fiction can complement each other with careful level design, but more often than not they clash. He cites *Donkey Kong*, a classic arcade platform game, as an example of this tension. Under the

game rules, a player is revived after death if she possesses a spare life, but nothing about the admittedly lightly sketched fictional world in which the game is situated explains this extraordinary act (ibid., pp. 123-130). The rule is a construct designed to aid the playability of the game at the expense of its fiction.

Although Juul emphasises the contribution of game rules to the creation of game worlds, his ontology still seems to suggest that there is often a fundamental disconnect between game rules and game fiction. I intend to use Sicart's definition of mechanics and the methodological tools for content analysis developed by the aforementioned scholars, in particular Bogost's idea of procedural rhetoric, to argue that game mechanics and game rules can perform a representational function more ambitious than what Juul allows them.

Chapter 3 – Methodology

This paper will address the research question by means of qualitative analysis, with reference to both Sicart's (2008) understanding of game mechanics and rules and the existing methodological and theoretical frameworks for qualitative game analysis discussed above. Once dismissed as a "shameful" alternative to quantitative research (Kracauer, 1952, p. 637), systematic qualitative analysis is now acknowledged as a both a complement to quantitative research and as a valid methodological approach in its own right (Kohlbacher, 2006, Mayring, 2000). Several attempts have been made to define a distinctly qualitative procedure. Mayring (2000) outlines two procedures of qualitative analysis, inductive category development and deductive category application. The former emphasises a process of refinement of definitional and categorical frameworks in the research process, while the latter applies existing theoretical approaches to a text or texts. Due to the nature of the field of games studies, there is little in the way of established theoretical approaches in the literature. For this reason, the method of qualitative analysis employed throughout this research paper was primarily inductive category development.

The method of qualitative analysis is not new to video games research (Consalvo and Dutton, 2006, Konzack, 2002, Aarseth, 2003, Malliet, 2007). Noting that many researchers engaged in game analyses have hitherto been reluctant to outline how these analyses were conducted, Consalvo and Dutton (2006) have devised a tentative template for the qualitative study of games, focusing on the areas of "Object Inventory, Interface Study, Interaction Map, and Gameplay Log" (*sic*, ibid.) This template is used to examine how sexuality is coded in EA's lifestyle simulation game *The Sims* (2000) and its expansion packs. One problem with Consalvo and Dutton's approach is that the entirety of the game's ludic elements, from the game mechanics to avatars and the player's interaction with the world, are subsumed under the rather nebulous category of "gameplay log". This speaks to the enormous complexity that qualitative game analyses entail. It is partially for this reason that this research paper delimits its scope to the areas of rules and mechanics.

Konzack (2002) shares Consalvo and Dutton's desire for a method of qualitative analysis that befits the unique properties of video games. He outlines seven different 'layers' in which we can situate an analysis of an individual game: hardware, program code, functionality, gameplay, meaning, "referentiality", and socio-culture, and applies them to an analysis of the game *Soul Calibur*. He is also cognizant of the need to consider games holistically rather than focusing on the different layers completely in isolation from one another. Again, however, there is a lack of attention to sub-layers and little in the way of suggestions for applying these layers systematically.

As outlined in the literature review above, there has been a trend in video games research, particularly since the publication of Juul's influential work *Half-Real: Video Games Between Real Worlds and Fictional Worlds* in 2005, toward ludological, rule-based analysis. It is within this framework of qualitative analysis that this research paper is situated. However, it was determined early in the research that an emphasis on a game's ludic elements at the expense of other forms of representation cannot provide an exhaustive analysis of any given game. Thus the scope of the research paper is intended to beexploratory rather than definitive.

The research paper is based on case studies of three contemporary video games:
1. *Papers, Please* (2013), Lucas Pope's game about life as a passport inspector in a fictional communist country
2. *Spec Ops: The Line* (2011), Yager's third-person shooter
3. *Cart Life* (2011), Richard Hofmeier's retail simulation game.

It was decided to employ case studies both for the scope they afford in terms of detailed analysis and because these three games are broadly representative of the variety of ways in which game mechanics and rules can perform representational functions. The results of the research paper are not intended to apply to all games equally. Kohlbacher (2006) has noted that case study research is often disparaged for its lack of generalizability, but this paper does not intend to claim that all game mechanics and game rules participate in meaning-making or all games can be

analysed according to its methodology. The aims of the case studies are rather more modest: to demonstrate how some games employ ludic elements as forms of representation and to suggest the variety of questions concerning games and representation that can be studied.

The particular games studied were chosen for several reasons. Firstly, each has been the subject of considerable critical attention. *Papers, Please*, the most recent game on the list, has been analysed as everything from a study on the banality of evil to an insufficiently broad critique of immigration policies (Juster, 2013, Craveirinha, 2014). *Spec Ops: The Line* caused something of a fissure in the games criticism community, with those who saw it as an example of big-budget games finally daring to question their embedded ideologies opposed to those who deemed that its pretensions to deconstruction were not enough to ignore the fact that it asked players to feel guilty for actions it forces them to commit (Keogh, 2013, Lindsey, 2012). *Cart Life* was the recipient of the 2013 Independent Games Festival's Seamus McNally Grand Prize, the most prestigious award of the indie games industry.

Secondly, the three games reflect distinct game design practices within different strands of the games industry. *Papers, Please* and *Cart Life*, both independently published games largely designed by one person, employ novel game mechanics to ask questions of the systems in which they are embedded, while *Spec Ops: The Line*, a so-called 'triple-A' title, is a much more mechanically conventional third-person cover shooter. This mechanical diversity provides a greater scope for an examination of the ways in which very different mechanics can create meaning.

Finally, each game helps answer (or at least suggest answers to) a number of distinct questions about game rules, game mechanics and representation. *Papers, Please* is analysed in relation to how game mechanics and game rules can interact with each other to represent a particular system. *Spec Ops: The Line* aids in the examination of the extent to which mechanics can be meaningful independently of the game's narrative arc and audio-visual representations. *Cart Life* demonstrates how mechanics can function as metaphors, and points to their interaction with other ludic elements such as in-game time.

Chapter 4 - *Papers*, *Please* and Politics By Other Means

"A common element of many politically-themed games is putting the message before the gameplay. I think games are a really powerful way to communicate but getting the gameplay right is critical. If I was writing a book or filming a movie things would be different. With this game, my focus from the beginning was on trying to make something entertaining to play." - Lucas Pope (Walker, 2014)

Lucas Pope's *Papers, Please* (2013) is an example of a video game in which mechanics, rules and traditional modes of representation combine to evoke the dehumanizing, dehumanising nature of life in a repressive regime. The following qualitative analysis outlines the ways in which the game's rules and mechanics perform a type of representation that can be variously interpreted as a nihilistic examination of the social structure that arises from a brutal, regimented totalitarian state or, as Albor (2014), has argued, a plea for increased commitment to activism marked by an awareness of the roles of larger systems in shaping smaller ones. The purpose of this analysis is not to suggest a definitive interpretation of *Papers, Please*; rather, I wish to examine how a careful examination of the game's ludic elements in conjunction with an analysis of its overall aesthetic can guide an understanding of the game's procedural rhetoric.

Game World

Set in an alternate reality version of the early 1980s, the player adopts the role of a border documents inspector in Arstotzka, a fictional country strongly reminiscent of a Soviet Bloc state. Her task is to check that the papers of new arrivals are in order by ensuring their authenticity and conformity to the ever-changing rules on who can and cannot enter. If a discrepancy is detected the player may interrogate the would-be entrant, and can sometimes proceed to more drastic measures such as fingerprinting, full-cavity searches or even detaining those suspected of terrorism. The player is motivated to perform well by the fact that she is paid on commission; every applicant successfully processed before the day ends at 6 p.m. earns him or her

$5, while money is deducted for mistakes. Wages are tallied at the end of each day, and if the player has a negative balance he or she is imprisoned and the game ends. The player can choose to forgo essentials such as food or heat in order to avoid a deficit, but such decisions have a knock-on effect on the status of her family members, who may become sick and eventually die if they are deprived for too long. The player can also spend money on optional extras such as a nicer apartment or upgrades to her booth.

Figure 1

Mechanics

Following Sicart's (2008) definition detailed in the literature review above, the core mechanics of *Papers, Please* are those the player employs to examine and interrogate arrivals, as it is these the player uses to advance toward the different narrative conclusions offered by the game[1]. When the player is presented with documents, he

---

[1] The game has twenty different formal endings, and numerous other de facto endings (such as when the player is blown up when failing to defuse a live bomb.)

or she can invoke a number of distinct but related mechanics that together make up the game's core mechanics. These are as follows:

- The player may use the cursor to pick up (and thereby open) and move around the documents themselves
- use discrepancy mode to highlight discrepancies between different documents, between the rules of entry (discussed below in the context of game rules) and the documents presented, or between the arrival's stated purpose of visit and that given on his or her entry permit
- interrogate arrivals by clicking a prompt which appears if a discrepancy is found (Figure 1).

At the end of each day, the player is presented with a simple budget and may decide what to spend money on by clicking on unselected items or unclicking unwanted items; this budgeting mechanic may also be regarded as a core mechanic, since it is essential for any in-game progression. Using Sicart's terminology, the methods (where 'method' is a synonym for 'action' or 'behaviour') invoked are simply the following: examine documents, compare evidence, interrogate suspects, and budget.

This simplicity belies the difficulty of the game's core mechanics. The player is required to carefully examine anything from one to five documents for the correct country seals, terminology and issuing cities while also comparing documents against documents and the prospective arrival him- or herself. Since in-game time is elapsing throughout, and the player needs to process a certain number of documents each day in order to afford to feed the player-character's family, the game rewards efficiency. The possibility of a terrorist attack occurring and cutting the day short, which happens with increasing regularity as the game progresses, is a further incentive for the player to rapidly process documents. The core mechanics thus have the effect of encouraging players to adopt a playing style that mirrors the cold, distant bureaucracy they mete out. Any excessive leniency may mean being unable to afford the bare essentials, which usually results in sickness, death and/or prison.

There is also little in the way of mechanical variation. Midway through the game the number of guards on patrol decreases from five to three and the player is given

access to a tranquiliser gun to compensate. This unlocks a new shooting mechanic, triggered by unlocking the box in which the gun is kept when a terrorist attacks. The player's action is limited to aiming the gun crosshair and firing by clicking. She receives a bonus for each target successfully hit.

Save this occasional departure, the core mechanics constitute the bulk of gameplay, and with enough familiarity with them it becomes easy to slip into a routine. As Parker (2013) notes, the game is easiest when the player takes the path of least resistance, even if this means ignoring the pleas of those with relatives on the other side of the border or detaining those suspected of the most minor infractions. The game embodies Chen's (2008) theory of game flow[2] taken to the extreme, as the player becomes so enveloped in the lull of the game's mechanics that she loses sight of the consequences of her actions.

---

[2] Chen draws on Mihaly Csikszentmihalyi's flow theory, which argues that people are happiest when engaged in 'flow', the condition of optimal human engagement with a given activity, to outline a game design methodology that optimises game experience for different types of players.

Figure 2

Papers, Please is as interesting for what it does not contain as for what it does. The totality of gameplay occurs either within the border checkpoint booth or on the end of day budget screen. Within the booth, the player performs all actions using cursors or buttons; there is no movement mechanic. The player never actually interacts with her family except by proxy - they appear as status icons on the summary screen at the end of each day (Figure 2 above), and the player can deprive them of essentials with the simple click of a button. These limitations help to heighten the strong sense of confinement the game evokes. The actions that are most immediate for the player are those she performs within the confines of the booth - not only because she has some immediate mechanical control over them, but also because their consequences are felt, both in interactions with non-player characters (NPCs) and in the newspaper headlines presented on-screen to the player every morning. For example, toward the end of the game's thirty-one days the player-character learns from the morning newspaper that an Arstotzkan serial child killer has escaped from prison in a neighbouring country and may be heading toward the border. He is then is visited by a man who hands him a photograph of a little girl whom he explains is his murdered daughter, before requesting that he allow the serial killer safe passage through the country but confiscate his passport so that the man may track him down. If the player

does as asked, we later learn through the morning newspaper that the serial killer has been "found dead in [a] confusing mess" (*Papers Please*, 2013). Micro-narratives like this invest the player with some limited control over the wider system even while he or she remains confined to the booth and its 'examine, compare, interrogate' drudgery. (Bizzochi, 2007).

The player's actions can actually lead to the successful overthrow of the government, but even this ending is tinged with ambiguity. A couple of days into the game the player is approached by an agent of EZIC, a mysterious underground organisation plotting to take down the government, and given a ciphered list of agents. Throughout the game EZIC agents appear periodically with more demands and missions for the player to complete, and she is bribed or rewarded with obscene amounts of money. It is no small feat to complete these missions successfully, since, as with the ciphered list, it is not always immediately obvious who EZIC wishes to be let through and who they would prefer the player keep out, and only the most diligent player can both keep an eye on possible agents or targets and perform the routine of core mechanics she has deemed most efficient.

On the final day, two EZIC agents crash through one of the armed border guards, assassinate the other two, and blow up the border checkpoint. If the player allows this to happen and has previously performed to EZIC's satisfaction, the organisation ultimately succeeds in performing a *coup d'état* and she is rewarded with an upgraded apartment and a new job as an EZIC agent. The game then ends. With no real ability to interact with the world outside of her booth, the player has little sense of whether EZIC's victory means the continuation of the regime's politics by other means or the possibility of real structural change. As Albor (2014) argues, the emphasis on the small system of core mechanics necessary to ensure the player's survival means a wilful blindness to the larger system and its concerns. The core mechanics thus serve to represent the player's limitations, both in terms of her inability to exercise change (except by proxy) and her epistemic ignorance.

Rules

Papers, Please is particularly good at demonstrating how game rules, following Juul (2005) and Bogost (2007), can help delimit a game's representational scope by contributing to its fictional world. The rules of *Papers, Please* respond to the game's ever changing political landscape - the system of gameplay is a reflection of the wider system in which it is situated. At the beginning of the game, entry is restricted to Arstotzkan citizens. Later on, foreigners are allowed passage with their passports alone, but entry permits are soon required following a spate of terrorist attacks. Eventually even Arstotzkans are required to carry additional identification. Citizens of certain states are to be denied entry when relations between those states and Arstotzka worsen, and these rules are as capricious as one would expect of a fundamentally unstable political situation. Diplomats and asylum seekers require special authorization, workers require work permits… the player is required to keep up with the latest bureaucratic decrees and penalised if he or she neglects them.

The player is also required to pay close attention to the documents themselves. She is aided in this task by a handbook of rules and regulations issued by the Ministry of Admission, in which she can view examples of authentic documents, information about neighbouring countries including country seals and cities that issue passports, as well as the latest bevy of documents required. Documents must not contradict each other or supply inaccurate information about the arrival. It is not always easy to identify these contradictions; an arrival may have put on just a couple of kilograms of weight since his or her weight was recorded, or have a slightly different hairstyle to the one in his or her passport photo. The game rules are not flexible enough to accommodate such nuances, and often the player will find him or herself incredulous at receiving yet another warning from the Ministry of Admission for being insufficiently thorough.

The game rules are thus a kind of microcosm of the repressive state apparatus at work in the game: entrants - and the player - must conform to the system or perish. They work with the game mechanics to distract the player from the larger social reality that is glimpsed only in the morning newspaper and occasional hushed

conversations with arrivals. They also, of course, actively work against the player, as Parker (2013) has noted: every new rule is both yet another thing to have to keep track of and another tightening of the state's grip on its borders. Of course, the player *is* free to break the rules, and may often feel compelled to do so when confronted with a mother crossing the border to reunite with her daughter or someone trying to eke out a better life in a neighbouring country. But everything is monitored, and each transgression is another strike against the player's financial and bodily security.

The player may feel the game's conflict between adherence to rules and the demand for autonomy most acutely in one possible ending in which the player-character is given a passport to neighbouring Obristan and a contact who doctors passports by a recurring character. With enough confiscated Obristanian passports, plus the money for doctoring fees, he can flee with his family; otherwise, he can go alone. The game makes a point of including the player-character's encounter with the Obristanian passport inspector in the ending cut-scene: the player has broken many rules in order to submit to new rules. It is disappointing that Pope chose to include this encounter in a cut-scene rather in the game world, as the scene does not contain the same clear association between the routine the player-character subjected others to in his former life as a passport inspector and what he is now forced to undergo without the audio-visual continuity of the game world.

The game is also cautious about revealing too much about certain rules, even while it works to ensure absolute conformity to others. During my first playthrough of the game, for example, I worked inefficiently while still learning how the core mechanics worked. As a result, I was forced to make sacrifices and forgo certain essentials in my daily budgets. It was never made clear that such a choice (if it can be called a choice) would lead to the sickness and eventual death of some of the player-character's family members. Of course, this is simple cause and effect - people die if they're not adequately fed or heated - but game logic does not always adhere closely to reality, and this surprise introduction of realism proved a wake-up call that modified the way I played the game. It also encouraged me to replay the game upon completion in the hopes of a better outcome for the player-character's family.

Several commentators have described the game in terms of Bogost's (2007) procedural rhetoric. Albor (2014) contends that its procedural rhetoric demands that activists are both fully committed to their cause and remain vigilant to the systems at work in everyday life, while Craveirinha (2014) argues that the game's steadfast adherence to Bogost's notion of what constitutes a video game makes it an "intellectual artifact" devoid of emotional resonance. For the purposes of this research paper it is enough to note that the game does engage in procedural rhetoric, however ham-fisted. The player engages with a rule-based system through game mechanics, forming her own conclusions about this system and its broader representational and metaphorical dimensions. Craveirinha (2014) seems particularly concerned about the potential for trivialising very real political and social issues by making them 'fun', but this is less a salient feature of the game than a subjective response to the game's mechanics. Disregarding problems with imputing authorial intention, Pope's quote above should not be taken as an endorsement of the game's 'funness'; after all, 'entertaining' is not necessarily a synonym for 'fun'.

Chapter 5 - *Spec Ops: The Line's* Desert of the Real

"We wanted to blur the lines between gameplay and narrative, focusing on the overall player experience, and hoped to create a seamless player experience where gameplay and combat informed us as much about character development and story as did traditional narrative elements such as cut scenes and expository dialogue." - Richard Pearsey, narrative designer of *Spec Ops: The Line* (Pearsey, 2012)

The tension between game rules and game fiction has been noted by Juul (2005, pp. 12-15), among others (Lantz, 2004, Caillois, 1961.) Historically, games have often been construed as either rules *or* fiction, never both (Juul, 2005, p. 12). In order to perform any analysis of a game's ludic elements, it is important to be able to distinguish these elements from traditional forms of representation often employed by games to assist in the creation of a fictional world, including audio (including music, dialogue and sound effects), images and animation, and writing. Goffman (1972, p.19) calls the principle whereby game "participants are willing to forswear for the duration of the play any apparent interest in the aesthetic, sentimental, or monetary value of the equipment employed" *rules of irrelevance*. It is easy to infer from this that the relationship between rules and mechanics on the one hand and traditional means of creating a game fiction on the other is arbitrary, that any game mechanic can be forcibly severed from a game's setting or theme or fiction and live to tell the tale. However, such a claim is equivalent to stating that the relationship between a film's editing and its soundtrack is arbitrary. It is true that there is no *necessary* relationship between gameplay and fiction, in that the same fundamental game mechanics may be made suit any number of settings - think of Mario in space, or characters from the animated Pixar film *Toy Story* in a mod[3] of *Grand Theft Auto IV* (2008)[4]. But to conclude from this that the relationship is unimportant speaks of an ignorance of

---

[3] A 'mod' is a modification of a game's original source code, texture files, etc. Mods are popular among players of PC games due to their accessibility, entertainment value, and tendency to increase the replay value of games.

[4] I am not making this up.

how games can successfully synthesise their disparate elements in order to, in Juul's terms, make "the rules fit the representation" (2005, p. 15). The following examines the extent to which the game mechanics of *Spec Ops: The Line* (hereafter referred to as *The Line*) work with the game's audio-visual elements and narrative arc to present a coherent theme.

First, a brief overview of the game's story. Set six months after the failed evacuation of Dubai due a series of devastating dust storms, *The Line* follows a three-man US army Delta Force team sent to Dubai on a covert reconnaissance mission following a distress signal from Colonel John Konrad of the disgraced 33rd infantry battalion, publicly disavowed for instating martial law prior to the events of the game. The men, led by player-character Captain Martin Walker, are ordered to locate any remaining survivors and then withdraw. However, they soon become embroiled in a conflict between local insurgents backed by the CIA and the now factional 33rd, split into those loyal to Konrad and the so-called 'exiles'. As the game progresses and the player learns more about events prior to Delta Force's involvement in the conflict, it becomes increasingly clear that Walker, motivated by an obsession with Konrad, the man who had previously saved his life in Afghanistan, is willing to go deeper and deeper into Dubai even as his squadmates, Adams and Lugo, appeal to him to withdraw. The squad begins to deviate more and more from its original objective, going from gunning down refugees-cum-insurgents, the very people they were sent to Dubai to protect, to gunfights with the 33rd in the name of "self-defence" and massacring innocents because "we have no choice".

Gameplay

The Line is one of the many cover shooters that have dominated game sales charts since the release of the seventh generation of games consoles[5]. The genre, popularised by 2006's *Gears of War* and typified by certain setpieces in *Grand Theft Auto IV* (2008)

---

[5] The history of video games is commonly organised according to 'generations' of rival games consoles. The consoles of the seventh generation were Sony's Playstation 3, Nintendo's Wii and Microsoft's Xbox 360.

and, more recently, Naughty Dog's immersive post-apocalyptic survival horror game *The Last of Us* (2013), is structured around gunfights against successive waves of enemies which feature a range of obstacles that players may crouch behind to avoid enemy fire, such as pillars, various types of debris, and doorways. Crouching is thus what Sicart (2008) terms a "contextual game mechanic", capable of being activated only in certain scenarios. The game includes a range of realistic weapons and projectiles, including Beretta M9s, AK-47s and M67 hand grenades. The player carries her weapon at all times, but the shooting mechanic is also contextual, limited to firefights and certain scripted events.

The game uses a squad-based mechanic to relieve some of the pressure on the player in more difficult fights. Using the controller's right bumper, the player may select an enemy for Lugo and/or Adams to target. The player can also use this battle management system to request the healing of a wounded squad-mate or to coordinate an attack with stun grenades. Each squad-mate specialises in a different tactic - Lugo is a marksman, while Adams is a heavy gunner good with grenades. An enemy who has been wounded but remains alive may be 'executed' by triggering a button prompt which appears when the player stands over them. The brief cinematic that ensues becomes increasingly grizzly as the game progresses.

Several commentators have noted that many of the game's key moments are structured around decisions which hinge on the game's shooting mechanic, specifically the decision of whether to shoot or not to shoot (Brindle, 2013a, Payne, 2014, pp. 10-11). For example, toward the end of the game's seventh chapter the player encounters members of the 33rd torturing a CIA agent who holds valuable information about the situation in the city by torturing and executing civilians in front of him. The player can choose either to prevent further civilian casualties by sacrificing the agent or to fire on the interrogators and risk the civilians. Similarly, in the eighth chapter Konrad, broadcasting over a radio signal, asks the player to choose between a refugee who stole water for his family - a capital offence in the desert city - and a soldier who apprehended the civilian thereby condemning his family to death. In the thirteenth chapter an angry mob of civilians hangs Lugo, and the player is

given the choice of dispersing the mob by firing into the air, doing nothing, or firing on the crowd.

What is interesting about all of these incidents is that, as with *Papers, Please*, although the mechanical choice offered to the player is a binary one, the choices themselves are morally complicated and rarely point toward a positive outcome, either for the player or those involved. The game emphasises that inaction is also a choice; when choosing between the civilian and the soldier, for example, if the player does nothing snipers mounted above will execute both parties. Payne (2014) notes that the choices are not governed by reward or punishment, thus underscoring the game's nihilistic attitude toward player agency.

However, each of these incidents can and should be considered distinct from the game mode that persists throughout the game. Even though the player can use the shooting mechanic to make interesting choices, for much of the game her task is simply to gun down enemies indiscriminately, regardless of whether they are insurgents, soldiers of the 33rd or CIA operatives. Military shooters are often criticised for their othering of various non-white, non-Western ethnicities (Šisler, 2006, Šisler, 2008), and *The Line*, with its faceless hordes of angry rebels ranting in heavily accented English, hardly fares much better. The difference is that, at least in battles, American soldiers are equally faceless, and both constitute targets to be eliminated. The game is at its most nihilistic not when it is forcing the player to choose between two equally unpleasant decisions, but in the throes of combat, where it is unable to disguise the trappings of the genre it appears to critique.

The Problem of Ludonarrative Dissonance

The Line is a fascinating object of study in part because, although its mechanics are largely conventional to a fault, they are performed within a game world that explicitly undermines what they represent. Several critics have argued that the game constitutes a critique of the video game industry's uncritical acceptance of the power fantasies of jingoistic military shooters, a trend that has been dubbed a "military entertainment complex" or "militainment" (Leonard, 2004, Keogh, 2013, Payne, 2014.)

This trend is exemplified by the blockbuster franchise *Call of Duty*, whose more recent releases have tended to be increasingly bombastic (in every sense of the word) spectacles set in roughly contemporary times and along geopolitical axes that parallel those that exist in real life. Others contend that the game's message is undermined by the trappings of genre conventions, the sheer unsubtlety of the game's critique of itself, or the lack of choice afforded to the player (Lindsey, 2012, Kazemi, 2012). This section outlines how the game advances its themes through non-gameplay elements and questions whether the game's own ludic elements refute any points it wishes to make about violence and player culpability.
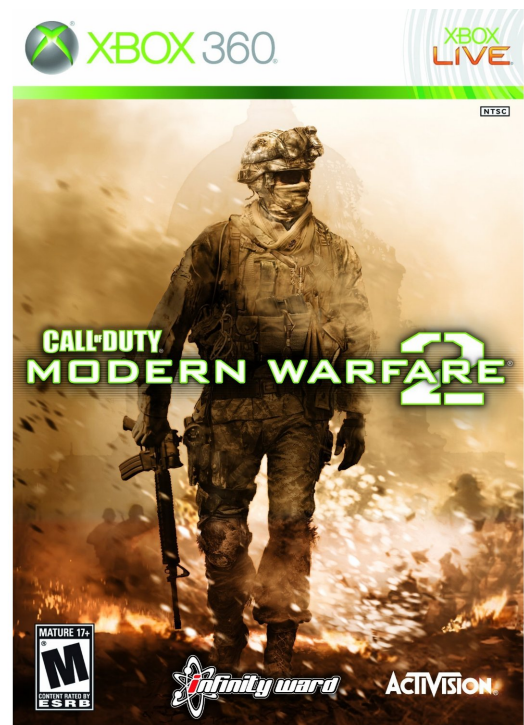

Figure 3

Figure 4

The game markets itself to those already familiar with and appreciative of the tropes of the military shooter and then attempts to subvert their expectations in the game itself (see Figures 3 and 4 above). Its sepia-toned cover features a gritty lone male protagonist who wouldn't look out of place advertising a *Call of Duty* game, while the blurb only offers a cryptic suggestion of what's to come in video game feature website IGN's description of the game as an "intense and *unique* war shooter" (emphasis mine). The FUBAR edition of the game features downloadable content that

relates to the game's multiplayer element for those who preordered the game, details of which are prominently advertised in the game blurb. The very existence of the game's multiplayer mode is itself a marketing tool designed to draw in fans of military shooters. The game's publisher, 2K games, insisted on its inclusion and outsourced its development to another studio. Lead game designer Cory Davis has referred to it as a "cancerous growth" which "raped" the core game mechanics (Purchese, 2012).
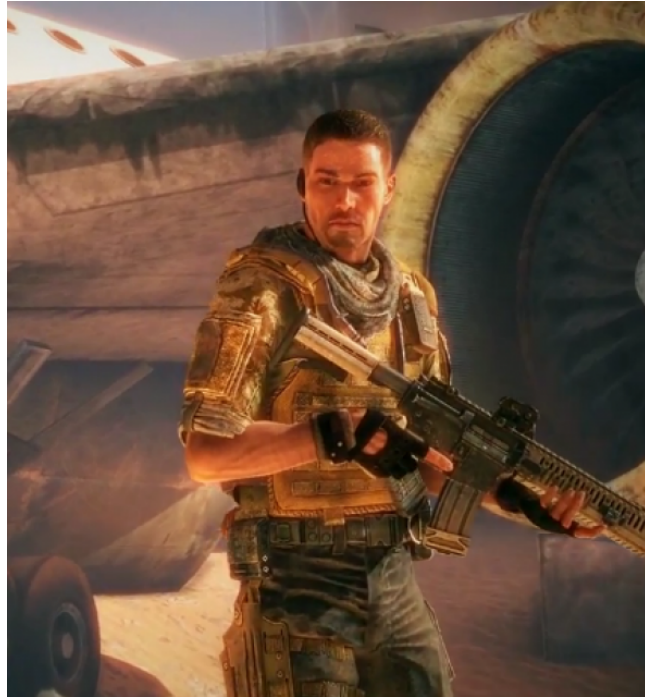

Figure 5

Figure 6

In the game itself, although the core mechanics rarely deviate from those outlined above, save the occasional contextual action button prompt, they are contextualised in markedly different ways as the game progresses. Like many other cover shooters, the game employs a third-person perspective, whereby Walker's avatar is visible onscreen as players move around in the game world. This creates a certain amount of critical distance that allows the player to scrutinise Walker - to view him as an object distinct from the actions the player performs through him - as well as establishing a visual parity between Delta Force's leader and his squad-mates. It also visually maps Walker's physical and mental deterioration. There is marked difference between the clean-cut and energetic Walker the player is introduced to at the beginning of the game and the bedraggled, barely-there figure with half his face burnt off he becomes (see Figures 5 and 6 above). Walker's dialogue also becomes increasingly unhinged - he goes from calmly declaring enemies "neutralised" to barking, "Kill is fucking confirmed!" and "Got the motherfucker!"

Pearsey's quote above points to cut-scenes and expository dialogue as filmic forms of representation adopted by many video games in order to advance a game's narrative, and as the quote suggests *The Line* is no exception. Walker's squad-mates often comment on the futility of the mission and express confusion about their objective, particularly after difficult choices are made. Walker's responses range from deliciously ironic - "This isn't just about finding Konrad anymore. It's about doing what's right." - to stubbornly unapologetic - "There's nothing good about what happened out there, but our hand was forced." Other characters express bewilderment over the squad's actions or cry in pain when shot. Near the end of the game, Walker experiences a series of vivid hallucinations in which Konrad implicates him in the destruction of the city, asking, "5000 people were alive in Dubai before you arrived. How many are alive today, I wonder?" Such comments seem to be aimed at both Walker and the player - indeed, the game is very overt in its expression of player culpability. From the beginning, the player is embodied as a collaborator; in the opening credits the game refers to him or her as a "special guest" using her 'gamertag'. Loading screens go from offering tips on how to use certain weapons and factual summaries of in-game events to snidely asking, "Do you feel like a hero yet?"

and noting that the US military does not condone the killing of unarmed civilians, "but this isn't real, so why should you care?"

The game's most controversial scene forces the player to engage with the consequences of the game's mechanics. Needing to pass through a security checkpoint held by the 33rd and heavily outnumbered, Walker decides to use white phosphorus shells from a nearby mortar cannon on the enemy. White phosphorus is a controversial chemical weapon known for its combustible properties; it creates a thick white mist that obscures movement and burns through flesh and clothing. Lugo objects but the captain counters that they have no choice. The player can test this hypothesis by ignoring the mortar cannon and firing directly on the enemy - he or she is invariably gunned down. When - for there is no if - the player eventually decides to use the white phosphorus, the camera switches to first-person perspective as he or she looks through a grainy computer screen that depicts the moving targets on the ground below, in an obvious allusion to the infamous "Death From Above" mission in *Call of Duty 4: Modern Warfare* in which the player fires on targets from a gunship (Garland, 2012). However, where the *Call of Duty* scene is an extension of the game's triumphalist rhetoric conducted from afar and designed to make the player feel invincible, *The Line* rips the security of distance away from the player. Once the 33rd notices Walker, they retaliate, and if the player dawdles he is shot down. Enemies hit with the white phosphorus rounds will scream audibly. Walker's reflection is visible through the monitor and melds with the white mist of the rounds. Once Walker declares the task "done", the squad must walk through the area they bombed in order to reach their destination. Soldiers with their legs blown off writhe in pain and plead for help and water. It is here that the squad - and the player - discovers that the soldiers they targeted were actually helping to protect civilians from Delta Force themselves, and that the final mortar round was fired on a temporary refugee camp. The camera alternates between a long, lingering shot of the charred, mutilated corpse of a woman and her child and a close-up of a clearly distressed Walker as Adams and Lugo argue in the background, with Lugo declaring, "He's turned us into fucking killers!" In a final irony, Walker warns his squad-mates that they need to keep moving and declares in a cold, calm voice that he is "going to make these bastards pay for what they've done."

Walt William, the game's lead writer, has said that one legitimate response to the brutality of *The Line* is simply to stop playing (Garland, 2012). If this is the case, then it is not true, as some critics have argued (Payne, 2014), that the white phosphorus mission should be contrasted with moments when the game presents the player with a choice; instead, it should be construed as the most extreme example of player choice the game offers. This is a choice equally open to the player of a *Call of Duty* game, or indeed any other game which forces a player to engage with situations uncomfortably close to the real world. The difference is how the choice is framed, how *The Line* tells the player - again and again - that he or she is doing something morally repugnant. However, the game's mechanics are not always framed in the same way. While the white phosphorus mission clearly intends to implicate the player, the standard game mode still offers the heady delights of battle familiar to military shooter aficionados even while the manner in which enemies are dispatched gets increasingly gruesome and Walker becomes increasingly psychopathic. Lindsey's (2012) particularly acerbic criticism of the game makes this point - the game may frame its mechanics one way, but it is fundamentally still about mowing down enemies in order to reach a cut-scene in which the protagonists agonise about how horrible war is. Payne (2014) has noted the way the game adopts the principle of ludonarrative dissonance, a term coined by Hocking (2007) to describe a mismatch between a game's narrative elements and ludic elements, in order to subvert player expectations, but it still does this fairly unevenly and with no particular subtlety.

Ultimately, the game works best as a demonstration of the maxim, borrowed from Jean-Paul Sartre, that appears on one of the later loading screens: "Freedom is what you do with what's been done to you." The player is given a series of binary choices - shoot or not shoot, advance or not advance, play or not play - and must work within their limits. The game thus expresses a rather cynical view of player agency in its mechanics and audio-visual representation.

Chapter 6 - *Cart Life*: The Daily Grind

Sicart's (2008) object-oriented understanding of mechanics (above) allows for an exploration of the relationship between mechanics and the inputs that trigger them. In the Xbox 360 version of *Spec Ops: The Line*, a single press of the controller's left trigger button invokes the shooting mechanic. The interrogation of a suspect in *Papers, Please*, by contrast, results from selecting discrepancy mode with a click of the left mouse button, moving the cursor around and clicking on the observed discrepancies, and then clicking the resulting prompt to interrogate the suspect. The input choices decided on during the game's development can thus depend on any number of game design decisions about the role of the game's mechanics; for example, a designer may decide to map a basic technique to a single button press while making a powerful mechanic require a complicated and/or time-dependent series of inputs, as is often the case in fighting games (ibid.) Studying the interrelationship of inputs and mechanics, especially in comparative terms, allows for both an understanding of the ways in which mechanics relate to game difficulty and their potential as metaphors.

Richard Hofmeier's *Cart Life* (2011) is a self-described "retail simulator". The player takes on the role of one of three up-and-coming street vendors attempting to eke out a living in the fictional city of Georgetown: Andrus, an immigrant from Ukraine who recently moved to Georgetown to open a newspaper stand, Melanie, a divorcee struggling to balance the demands of her newly-opened coffee stand and her school-aged child, and Vinny, a down-and-out young man who has recently returned to his hometown to try his hand at becoming a self-employed bagel vendor following years of moving from one menial job to another. Although each character has a different goal, all are accomplished by making enough money within a specific time frame. In order to do so the player must find a suitable food cart, navigate the city's bureaucracy and obtain a permit, and then begin selling to customers while ensuring that the player-character has enough supplies and gets adequate rest and nutrition. Each character also has a specific addiction: Adrus' is cigarettes, Vinny's is coffee and Melanie's is her daughter.

Figure 7

The game's sprite-work[6] is monochrome and heavily pixelated (Figure 7), which lends it a minimalist aesthetic complemented by the game's lowtech, chiptune[7] soundtrack. The self-consciously minimalist aesthetic is interesting considering that the game's rules are often anything but minimal; the lack of visual noise helps the player deal with the sheer amount of information they have to digest. It also functions as an approximation of lived experience, just enough for the player to empathise with. Hofmeier has justified the decision as follows:

---

[6] The term 'sprite' refers to any two-dimensional image or animation situated within a larger scene. A game's 'sprite work' is its sprite artwork as a whole.
[7] Chiptune is a genre of electronic music which is produced using the sound chips of vintage hardware, often those of video game consoles.

The idea of Cart Life and the reason I wanted to use the pixel aesthetic is not arbitrary and it's not entirely nostalgic. Pixels - the large, rectangular hallmark of pixel art - do something that parallels what the rest of the game does in its gesture. You have the human eye, infinitely complex and mysterious and beautiful, represented by a single black dot. That simplification, as profane as it is, taking all that nuance and beauty and summating it with a single black rectangle, and then getting entire expressions for these characters this way? The difference between the human face and this pixel grid is infinite, but we can bridge the gap. We can fill in their details with our own lives. This is why I wanted to use pixels for the game (Donlan, 2013).

Mechanics as Metaphor

Figure 8

The game's core mechanics relate to closing sales. Once the player has established herself as a street vendor, she can begin selling a range of goods dependent on the

supplies she currently has at prices she determines in the in-game menu. In order to close a sale, a number of steps must be executed correctly. Firstly, the player must answer a multiple-choice question about what the customer ordered by typing the correct answer letter (A, B, C, or D). Then, depending on the goods, a sentence may appear on screen, usually something factual or self-evident about the product like "Caffeine is a stimulant" or "This coffee wakes you up". The player must correctly type this into the on-screen text box. If this is completed correctly, the customer will hand the player-character a note and the player must then manually calculate the change by opening the vendor's key box with a click and then making up the correct change by clicking on notes and coins. A customer patience metre is on screen at all times during the transaction and gradually depletes, with some customers having less patience than others. If the patience metre is exhausted or the player repeatedly fails to perform a step correctly, the sale is lost. Sales are also timed, with the player encouraged to better their previous records with the incentive of often generous tips.

Other mechanics function similarly. For example, Vinny can bake bagels and other goods in the kitchen of his apartment. Making something successfully involves paying close attention to the recipe, both to the ingredients required and the order of operations (mixing, baking, boiling, and so on). Although cooking is not as involved a mechanic as selling, in that the player merely clicks on ingredients to add them and there is no time limit or mental arithmetic involved, it is not possible to retrieve ingredients once deposited into the mix and even a single false step results in an inedible "crud", wasting valuable ingredients.

Cart Life's mechanics thus establish a certain empathy with the player-characters. With its idiosyncratic input choices, the game attempts to replicate the emotions evoked by certain tasks rather than slavishly recreate the minutiae of the tasks themselves. Finishing a sale and baking bagels are difficult because they are difficult in real life. The decision to have to require the player to input a sentence relating to the product speaks to both the precision required to brew a pot of coffee while engaging in small talk and the banality of the small talk itself. Sentence input is also required when setting up the day's newspapers while playing as Andrus. Usually the phrases are fairly similar to the ones required to close a sale - "Cut the ties", "Folding

newspapers", "Stack them neatly", mixed with an tentative optimism - "Hopefully these will all sell". However, when Andrus is in poor financial or mental health the messages become much more sinister, ranging from the existential - "What difference do papers make?" - to the quasi-suicidal - "I am not needed in this world." The input associated with the mechanic is thus an extension of Andrus' wider worldview at any given time.

While the sentence input choice may be considered a metaphorical approximation of the difficulty of the associated tasks, the manual calculation of change is rather more literal. This may be down to the fact that it is easy to 'gamify' such a task without losing the feeling of pressure that the real-world equivalent evokes. This is not to say that inputting sentences is any less difficult. Indeed, the game's mechanics have a fairly steep initial learning curve, not helped by the almost complete lack of guidance given to the player. It is not uncommon for players to make a minor mistake that soon spirals out of control (Brindle, 2013b). For example, in one of my early playthroughs of Andrus I swapped my permit with another street vendor but continued to trade at my old cart. I was then fined $50 by a passing police officer and, with no money left to pay the rent, kicked out of my motel room and refused access to my room to pick up my ageing cat. Juul (2009) has noted that game players may be less likely to experience failure as an emotionally negative event if it is due to a series of small mistakes that they perceive to be outside of their control, rather than to a single mistake that may be attributed to low skill. In *Cart Life*, however, failure is emotionally negative because the game functions as, in Donlan's (2013) words, "a kind of empathy generator"; the fact that the system is conspiring against the player-character does not lessen the emotional impact of failure.

Discipline and Punishment

The game's rules approximate real-life systems of, in Foucauldian terms, discipline and punishment. In particular, in-game time functions as a means of disciplining players, who must try to accomplish tasks as efficiently as possible and adhere to 'normal' waking hours lest they become unable to visit certain buildings with restricted opening hours. Every second of real time is a minute of in-game time, and

certain tasks, like walking from one area of the city to another, take many hours. When playing certain characters the player is unable to keep track of time until they have purchased a watch, meaning that they may suddenly discover from an NPC that it is midnight and that they have wasted an entire day. Juul (2005, pp.151-152) notes that there is often a disconnect between in-game time and real time. In *Cart Life*, in-game time ticks away regardless of what the player is doing. The game has no pause function - the only way to suspend the game's clock is to stop playing.

The characters' nutrition, sleep and addiction metres also determine what they can and cannot do. A fatigued or hungry character will alert the player by interrupting the standard game mode with a brief animation explaining their predicament; these get more and more desperate. Addiction metres can be ignored, but doing so may slow a character down and giving into temptation sometimes provides tangible benefits - for example, Vinny walks much faster when he has ingested coffee. Trying to keep a handle on the character's various needs involves both time and money, both of which are often in short supply.

As a life simulator exploring the trials and tribulations of lower-class characters in a generic American city, *Cart Life* may be the closest that games have come to modelling post-recessionary America. Tellingly, it also relies on many of the same mechanics as gaming's current biggest genre, the ubiquitous mobile simulation game - price setting, interacting with customers, upgrading items - performing a subversive function not dissimilar to *The Line*'s dismantling of the military shooter. Hofmeier has described his initial marketing of the game as follows:

> Before too many people had played the game, it was easy to lie about *Cart Life*… Which I did all the time with gusto. I would say, "It's like *Farmville*. It's like following your *Sims* character to your job - what are you going to charge for lattes and what would you paint your stand? It's fun." And that was the proposition. People would then play it and see it for what it was, and it seemed like it was easier for them under those circumstances to be compelled by the tender parts and to feel as though these things were really at stake. (Donlan, 2013.)

Where these games micromanage player expectations, *Cart Life* subverts them. Where the characters of these games are player-designed creations teetering precipitously close to the edge of the uncanny valley, *Cart Life*'s characters feel warm and human even while they are grey and pixelated. That the game succeeds in creating empathy from mechanics and rules is testament to the power of video games as a medium for empathetic experiences.

Chapter 7 – Conclusion

This research paper has examined how contemporary video games create meaning through mechanics and rules. Qualitative analyses were performed on three games according to Sicart's object-oriented understanding of mechanics and rules and the different perspectives on the semiotic structure of games outlined in the literature review. It was found that mechanics and rules perform different representational functions in each game. In *Papers, Please*, players engage with a rule-based political and bureaucratic system through game mechanics that encourage them to keep their heads down and conform to the edicts of the state. In *Spec Ops: The Line*, the game's mechanics perform a complicated function within a game world that expressly condemns the excesses of the military shooter. In *Cart Life*, the means of input of the game's core mechanics help establish empathy between players and the characters they control, while the game rules punish player indiscipline.

These findings suggest that there are many ways in which game designers can employ game mechanics and rules to perform representational functions. It is hoped that this will encourage designers to look at mechanics not merely as functional tools designed solely to be performed in order to achieve a sufficiently pleasing win state, but as means of expression not dissimilar from cinematics, audio, and other traditional methods of evoking atmosphere and theme in video games.

It should be noted that the research conducted in this paper was limited by both time constraints and the scope of the research itself. For this reason, there is much potential for further work on this particular topic. Further studies could assess the impact of what Swink (2009) terms "game feel", defined variously as the aesthetic sensation of control afforded to a player by a game's mechanics, or the way a game's mechanics can serve as extensions of the senses (ibid., p. 33), on the semiotic structure of game mechanics, or concoct some general guidelines for creating meaning-making through gameplay.

Chapter 7 – Conclusion

It should also be noted that the topic is limited in its potential for generalisation. A decision was made early on to focus on contemporary video games; this should not be taken to suggest that the phenomena discussed herein did not exist in earlier generations of video games. A historical survey of the evolution of representational functions in game mechanics and rules is another direction that this research could take. A fascinating enterprise in itself, this would allow game designers to draw on lessons learnt from the past as well as look toward the future.

There is scope for more comprehensive qualitative analyses of games that encompass both gameplay features and the game's other representational functions. Due to the limitation imposed by the scope of this topic, the relationship between these two was drawn on only where relevant (as with the analysis of *The Line*). It is hoped that the research herein adds to the methodological considerations in games research advanced by Consalvo and Dutton (2006) and Konzack (2002) and outlined in the methodology chapter above.

The three games discussed herein demonstrate that designers are increasingly attuned to the semiotic potential of game mechanics and rules. Those who play games often focus on what is *wrong* with the medium, and it is true that there is plenty to find fault with: the continued sexualisation of women in mainstream games, the overreliance on cut-scenes and filmic modes of representation, the games industry's love of downloadable content, among other problems. Yet the medium continues to innovate, creating new types of aesthetic experience unknown even ten years ago. Games like those discussed in this research paper, far from proving that we must look to normative and idealistic models of game design in order to create the future of games, suggest that what Zimmerman (2013) has termed the "ludic century" is already upon us.

References

Aarseth, E. (2003) "Playing Research: Methodological approaches to game analysis". *Proceedings of the Digital Arts and Culture Conference*. Royal Melbourne Institute of Technology, pp. 28–29.

Albor, J. (2014) *Systems and Activism in* Papers, Please. Available at: http://www.popmatters.com/post/177848-systems-and-activism-in-papers-please/%20/ (Accessed 26th February 2014)

Atkins, B. (2003) *More Than a Game: The Computer Game as Fictional Form*. Manchester: Manchester University Press.

Barham, N. (2013) *The Violence of BioShock Infinite*. Available at http://natebarham.com/post/58354689864/the-violence-of-bioshock-infinite (Accessed 26th Feburary 2014)

Bizzochi, J. (2007) "Games and narrative: An analytical framework". *Loading...*, 1(1).

Bogost, I. (2007) *Persuasive Games: The Expressive Power of Videogames*. Cambridge: MIT Press.

Brindle, J. (2013a) *Relax, Don't Do It: Pulling the Trigger in Spec Ops: The Line*. Available at: http://brindlebrothers.blogspot.co.uk/2013/03/relax-dont-do-it-pulling-trigger-in.html (Accessed 26th February 2014)

Brindle, J. (2013b) *The McDonalds Sim and September 12: What Does It Mean for a Videogame to be Political?*. Available at: http://www.newstatesman.com/voices/2013/02/political-video-game (Accessed 26th February 2014)

Caillois, R. (1961) *Man, Play, and Games*. New York: Schocken Books.

References

Chaplin, H. and Ruby, A. (2006) *Smartbomb: The Quest for Art, Entertainment, and Big Bucks in the Videogame Revolution*. Chapel Hill: Algonquin Books.

Chen, Jenova (Date Unknown) *Flow in Games*. Unpublished Master of Fine Arts Thesis. University of Southern California.

Consalvo, M. and Dutton, N. (2006) "Game Analysis: Developing a Methodological Toolkit for the Qualitative Study of Games". *Game Studies*, 6(1), pp. 1–17.

Craveirinha, R. (2014) *Videogame Utopia: Passage Denied, a* Papers, Please *Review*. Available at http://metavideogame.wordpress.com/2014/01/13/videogame-utopia-passage-denied-a-papers-please-review/ (Accessed 26th February 2014)

Donlan, C. (2013). *Cart Life: "The Only Thing That Changed Was Me"*. Available at: http://www.eurogamer.net/articles/2013-01-24-cart-life-the-only-thing-that-changed-was-me (Accessed 26th February 2014)

Electronic Arts (2000) *The Sims*, PC. Redwood City: Electronic Arts.

Flanagan, M. (2009) *Critical Play: Radical Game Design*. Cambridge: MIT Press.

Frasca, G. (2003a) "Ludologists Love Stories, Too: Notes from a Debate That Never Took Place." *Level Up: DIGRA Conf. 2003,* Utrecht, The Netherlands.

Frasca, G. (2003b) "Simulation versus narrative." In: MJP Wolf, B. Perron eds*., The Video Game Theory Reader*. New York: Routledge, pp.221–235.

Fullbright Company, The. (2013) *Gone Home*, PC. Portland: The Fullbright Company.

Garland, J. (2012) *Aftermath: Crossing the Line with Walt Williams*. Available at: http://gamingbolt.com/aftermath-crossing-the-line-with-walt-williams (Accessed 26th February 2014)

References

Goffman, E. (1961) *Encounters: Two Studies in the Sociology of Interaction*. New York: Penguin, 1972.

Hall, S. (1997) *Representation: Cultural Representations and Signifying Practices*. Milton Keynes: SAGE.

Hocking, C. (2007) *Ludonarrative Dissonance in Bioshock*. Available at: http://clicknothing.typepad.com/click_nothing/2007/10/ludonarrative-d.html (Accessed 26th Febuary 2014)

Hofmeier, Richard (2011) *Cart Life*, PC. Seattle: Richard Hofmeier.

Huizinga, J. (1949) *Homo Ludens*. London: Routledge and Kegan Paul.

Infinity Ward (2007) *Call of Duty: Modern Warfare*, Xbox 360. Woodland Hills: Activision.

Infinity Ward (2009) *Call of Duty: Modern Warfare 2*, Xbox 360. Woodland Hills: Activision.

Irrational Games (2013) *BioShock Infinite*, Xbox 360. Quincy: 2K Games.

Jansz, J. and Martis, R.G. (2007) "The Lara Phenomenon: Powerful Female Characters in Vdeo Games". *Sex Roles*, 56(3-4), pp.141–148.

Järvinen, A. (2008) *Games Without Frontiers: Theories and Methods for Game Studies and Design.* Doctoral Dissertation. University of Tampere, Finland.

Jenkins, H. (2004) "Game Design as Narrative Architecture". In: Noah Wardrip-Fruin, Pat Harrigan, eds., *First Person: New Media as Story, Performance, and Game*. Cambridge: MIT Press, 2004.

References

Johansson, M. et al. (2014) "Analyzing the Social Dynamics of Non-Player Characters". In *Frontiers in Gaming Simulation*. Springer, pp. 173–187.

Juul, J. (2005) *Half-Real: Video Games Between Real Rules and Fictional Worlds.* Cambridge: MIT Press.

Juul, J. (2009) "Fear of Failing? The Many Meanings of Difficulty in Video Games". In MJP Wolf and Bernard Perron eds., *The Video Game Theory Reader 2.* New York: Routledge, pp. 237-252. Available at https://www.jesperjuul.net/text/fearoffailing/ (Accessed 26th February 2014)

Juster, S. (2013) *Exploring the Banality of Evil in* Papers, Please*.* Available at: http://www.popmatters.com/post/171036-papers-please/ (Accessed 26th Febuary 2014)

Kanaga, David and Ed Key (2013) *Proteus*, PC. Location Unknown: David Kanaga and Ed Key.

Kazemi, D. (2012) *Review: Killing is Harmless, by Brendan Keogh*. Available at: http://tinysubversions.com/2012/11/review-killing-is-harmless-by-brendan-keogh/ (Accessed 26th Febuary 2014)

Keogh, B. (2013) "Spec Ops: The Line's Conventional Subversion of the Military Shooter". *DeFragging Game Studies: DIGRA 2013.* Georgia Institute of Technology, 26th-29th August 2013.

Kohlbacher, F. (2006) "The Use of Qualitative Content Analysis in Case Study Research". *Forum: Qualitative Social Research,* 7(1) : pp. 1-23.

Konzack, L. (2002) "Computer Game Criticism: A Method for Computer Game Analysis". *CGDC Conf.,* University of Tampere, 6-8 June 2002.

Kracauer, S. (1952) "The Challenge of Qualitative Content Analysis. *Public Opinion Quarterly*, 16(4): pp. 631–642.

References

Lantz, F. (2004) "Ironclad. A Game for Two Players: In: Katie Salen, Eric Zimmerman eds., *Rules of Play: Game Design Fundamentals*. Cambridge: MIT Press, pp. 284–297.

Leonard, D. (2004) "Unsettling the Military Entertainment Complex: Video Games and a Pedagogy of Peace". *SIMILE: Studies in Media & Information Literacy Education*, 4(4), pp.1–8.

Lindsey, P. (2012) *Spec Ops: The Line Isn't Profound, It's a Shooter*. Available at: http://pixelsordeath.com/features/spec-ops-the-line-isnt-profound-its-a-shooter. (Accessed 26th Febuary 2014)

Lundgren, S. and Bjork, S. (2003) "Game mechanics: Describing computer-augmented games in terms of interaction." *Proceedings of TIDSE*. Darmstadt, Germany, 24-26th March 2003.

Malliet, S., (2007) "Adapting the principles of ludology to the method of video game content analysis". *Game Studies*, 7(1).

Mateas, M. (2002) *Interactive Drama, Art and Artificial Intelligence*. Unpublished PhD Thesis. Carnegie Mellon University.

Mayring, P. (2000) "Qualitative content analysis". *Forum: Qualitative social research*, 1(2).

Mäyrä, Frans (2008) *An Introduction to Game Studies*. London: SAGE.

McMillen, Edmund and Tommy Refenes (2010) *Super Meat Boy*, Xbox 360. Santa Cruz: Team Meat.

Murray, J.H. (1997) *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, New York: Free Press.

Myers, D. (2003) *The Nature of Computer Games*. New York: P. Lang.

References

Naughty Dog (2013) *The Last of Us,* Playstation 3. Santa Monica: Naughty Dog.

Newsgaming.com (2003) *September 12th: A Toy World*, PC. Uruguay (city unknown): Newsgaming.com.

Parker, R., (2013) *The Art of* Papers, Please. Available at: http://www.firstpersonscholar.com/the-art-of-papers-please/ (Accessed 26th Febuary 2014)

Payne, M.T., (2014) "War Bytes: The Critique of Militainment in Spec Ops: The Line." *Critical Studies in Media Communication*, (ahead-of-print), pp.1–18.

Pearsey, R. (2012) *No Good Deed: Narrative Design in* Spec Ops: The Line. Available at: http://www.gamasutra.com/view/feature/176598/no_good_deed__narrative_design_in_.php (Accessed 26th Febuary 2014)

Pope, Lucas (2013) *Papers, Please*. PC. Location Unknown: Lucas Pope.

Purchese, R. (2012) *Yager: Spec Ops Multiplayer Was "Bullsh**" and "Should Not Exist"*. Available at: http://www.eurogamer.net/articles/2012-08-29-yager-spec-ops-multiplayer-was-bullsh-and-should-not-exist (Accessed 26th February 2014)

Rockstar Games (2008) *Grand Theft Auto IV*, Xbox 360. Edinburgh: Rockstar Games.

Ryan, M.-L. (2002) "Ludology vs. Narratology? A Critical Investigation of the Aesthetic Properties of Digital Media". Web-based seminar contents for the course offered at the IT University of Copenhagen, 1st-4th October 2002.

Salen, Katie, and Eric Zimmerman (2004) *Rules of Play: Game Design Fundamentals*. Cambridge: MIT press, 2004.

Sicart, M. (2008) "Defining Game Mechanics". *Game Studies*, 8(2).

References

Šisler, V. (2008) Digital Arabs: Representation in Video Games". *European Journal of Cultural Studies*, 11(2), pp.203–220.

Šisler, V. (2006) "Representation and Self-Representation: Arabs and Muslims in Digital Games". *Gaming Realities: A Challenge for Digital Culture.* Athens: Ed. Fournos.

Sniderman, Stephen (1999) "Unwritten Rules". In: Katie Salen, Eric Zimmerman eds., *Rules of Play: Game Design Fundamentals*. Cambridge: MIT Press, pp. 476-503.

Squaresoft (2002) *Final Fantasy X*, Playstation 2. Tokyo: Squaresoft.

Swink, S. (2008) *Game Feel: A Game Designer's Guide to Virtual Sensation*. Burlington: Morgan Kaufmann.

Tavinor, G. (2009) *The Art of Videogames*. Oxford: Wiley-Blackwell.

Yager (2012) *Spec Ops: The Line*, Xbox 360. Berlin: 2K Games.

Walker, P. (2014) *Why Are Developers Proud That Their Games Have Nothing To Say?*. Available at: http://www.nowgamer.com/features/2256292/why_are_developers_proud_that_their_games_have_nothing_to_say.html (Accessed 26th Febuary 2014)

Warpefelt, Henrik, and Björn Strååt (2013) "Breaking immersion by creating social unbelievabilty." *AISB 2013*, University of Exeter, 3rd-5th April 2013.

Zimmerman, E. (2013) *Manifesto: The 21st Century Will Be Defined By Games*. Available at http://ericzimmerman.com/files/texts/Manifesto_for_a_Ludic_Century.pdf (Accessed 26th February 2014)