Introduction

Games begin and end in space. From the two school-children haphazardly throwing their pullovers onto the ground and kicking a can for an impromptu game of football, to the grandmaster delivering the unforeseen counter-attack to an IBM computer in a world-championship chess match, different spaces mingle, merge and oppose one another in the structuring and process of the game. The importance of space to the definition of the game results in the classical view that the game is a transition from the everyday to somewhere else, part of but beyond the quotidian, a "stepping out of 'real' life into a sphere of activity with a disposition all of its own" (Huizinga 1970, p. 26); "a protected universe: a pure space" (Caillois 2001, p. 7); "a little cosmos of [its] own" (Riezler, cited Goffman 1961, p. 27). This classical view remains mostly accepted and unchallenged within contemporary writing on the game, especially in the sphere of video game criticism, although Juul implies a link, no matter how tenuously with other spaces, "the space in which the game takes place is a subset of the larger world" (Juul 2005, p. 164) a notion best realised in Salen and Zimmerman's work on "The Magic Circle". Derived from Huizinga, the magic circle is "a closed circle, the space it circumscribes is enclosed and separate from the real world... In a very basic sense, the magic circle is where the game takes place" (Salen and Zimmerman 2005, p. 76). Clearly, a game of cricket cannot take place without an approximation of playing field replete with stumps and wicket, with literal boundaries denoting how many runs should be awarded to the batting side, but this addresses only part of the game, namely, that which is inside of it. Cultural studies of entertainment media, with special reference to video games, (see e.g. Carr et al, 2006; Dovey and Kennedy 2006; Jenkins 2006) examine how the game traverses the magic circle and travels beyond its boundaries

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Spatial Typologies of Games

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through such means as fan cultures and beta testing, but the essence of the game, how a game is constructed, is often ignored. Space and boundaries both within and without fluidly construct meaning to the game, and exclusivity achieved by splicing the game from applications of space does dis-service to the connection the game has to its reliant and associated spaces. For example, where a football pitch is the space of play, it remains related to the field it is played on. In games, what happens on the peripheries of the magic circle is often as important as what happens within it. The construction of the game through the fluidity and tension of space and its associated transformative effects upon the subjects and objects involved with the game, is the topic of investigation in this article. In the first part, via the conceptual model of 'trans-space'. I suggest a spatial typology for the analysis of games. In the second part I

apply this model to a variety of games, concluding with how spatial analysis has wider significance for the wider discipline of video game studies.

1. What Is Trans-Space?

Trans-space is a term for a model of spatial analysis which updates Henri Lefebvre's classic work *The Production of Space* (1991). Lefebvre's original model works on a triad of perceived, conceived and lived space. Perceived space addresses how the self comprehends and interprets the surroundings. For instance, with two gamers playing *Pro Evolution Soccer 5*, the interpretation as to when a player is offside is a decision made by the computer, yet the perception of this decision will be different based on whether one is attacking or defending. Conceived space is the space of science and rationality, where there are pre-ordained units of measurement and limitation. All video games produce conceived space through the graphical representation of the game. These spaces can be highly abstract, as with *The Sentinel* or *E-Motion*, or hyper-realised such as Liberty City in *GTA IV*. Lived spaces are venues where the everyday and the extraordinary take place. Often heavily influenced by perceived and conceived space, lived space is nevertheless viewed as a separate entity. This has resonance with video games in multiple ways. First, games such as *The Sims* or *Second Life* represent a lived space. Second, they can become a lived space through spending an inordinate amount of time in *World of Warcraft*'s Azeroth. Third, many consoles and PC's are located in the lived space of the home, be that bedroom or living room.

The triadic model is designed to allow for the fluidity of movement between spaces "the individual may move from one [space] to another without confusion" (Lefebvre 1991, p. 40), which is the second constituent of trans-space, yet it is also clear that the movement that takes place is suggestive of something more transient and less substantial, an implication made in Lefebvre's commentary on the transitory attributes of certain spaces (*ivi*, p. 154-5) and on the situation and orientation of objects within this space (*ivi*, p. 209). It is likely an individual will occupy many spaces at any given point in time, such is the degree of movement between one and another. This is shown in the Venn diagram below, with the top circle representative of lived space, the left circle as perceived space and the right circle as conceived space. This also shows how it is possible, indeed likely, that an individual will inhabit more than one space at any given time. This is what gives rise to 'trans-space': the simultaneous inhabitation of one-or-more types of space at the same time and the mediation/movement between these spaces. However, the contraction and expansion of actors into new spaces requires Lefebvre's model to be revised. Therefore, trans-space introduces the additional spatial typology of the *digital*. Digital space attempts to adequately convey the simultaneous
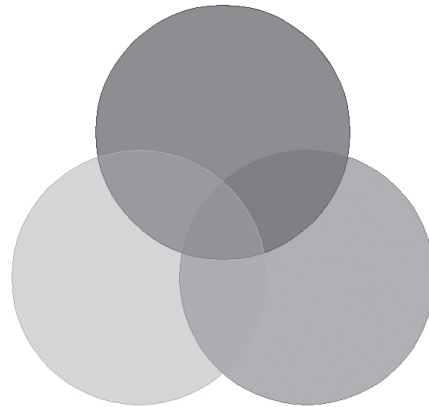

Fig. 1 – Venn Diagram demonstrating spatial overlap

projection and distancing that is central to many of the technologies we communicate with on a second-by-second basis. The Internet is the current paragon of a digital space; this has no relation to the delivery technology (software, hardware), but instead to how it alters the way in which we, as individuals, operate within our communities and society. Digital space also represents an attempt to circumvent the problems caused by the hindrance of the "real world" versus "virtual world" dichotomy. The former is defined by it being more 'natural' and/or detached from mediation, whereas the latter is manifested by technology, often via a graphical user interface such as *Windows* or a video game (see Shields 2002; Dovey and Kennedy 2006, p. 8; Huisman and Marckman 2005, p. 398-402). Traditional commentary on the game as a separate space and time hermetically seals it from exterior influences, and that is subsequently mirrored in contemporary writing, resulting in differentiation between what is perceived to be 'real' and 'unreal', similar to the rational, conceived arena of rules (ludology) and the perceived, cultural arena of fiction (narratology). This is in distinction to trans-space whose utility is derived from its flexibility; it is its transience which allows it accommodate apparent contradictions, as a digital space can equally take the form of a game of chess, or using a mobile phone, or indeed of using a mobile phone via SMS to play chess.

2. Games and Space

From the literature on gaming, it is clear that space is vital in showing how the game is construed and interpreted. What this article will engage with now is how space is involved in the construction of the game and the means by which the game comes into being, how different spaces affect different levels of the game and the bearing this has on the different comprehensions of the game. Building a game typology through space does not preclude a spatial definition of the game, but as has been demonstrated, the use of space to define the game through its exclusivity and apartness from its surrounding spaces can cause some confusion. Additionally, as

Juul notes, there are linguistic concerns with 'game' and 'play', with some languages possessing strong distinctions and others not, he clarifies this by focussing on the "set of games that we can describe as *rule-based games*" (Juul 2005, p. 29) resulting in the following definition:

> "A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome and, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable." (ivi, p. 36)

This definition is interesting for several reasons. First, it negates the problem between the action of "playing a game" as with squash or chess, and "running a race" as with motor racing or athletics; both are adequately cohered by Juul's definition. Second, it permits this inclusion while excluding play-games such as ring-a-ring-roses, or idly playing with the mouse-pointer on a PC desktop. Third, it excludes story-telling and with it both the practice of word games and an exclusively narratological approach to game analysis – a game may tell a good story, but the outcome remains fixed. Fourth, and most importantly for this study, it inheres "borderline cases" (Juul 2005, p. 44), where the games included are trans-spatial, that is to say, in flux, possessing game-like qualities, but not purely games. For example, Russian roulette is a game of pure chance and has no player effort, but has rules, consequences and different values assigned to the outcome. The identification of a permeable boundary by Juul is important to a spatial typology of games, which looks to examine which spaces operate at the level of the game and how they relate to one another both within and outside of the game. Concentrating on the nuances and subtleties of a spatial analysis provides a way of seeing how the game is produced and constructed in and with space rather than as a distinct and separate arena. Below, I will chart the game sequentially demonstrating the impact of different spaces upon different games and the accompanying problems facing different schools of thought within the academic community.

2.1 Perceived Space

As stated at the beginning of this article, all games begin and end in space. More expressly, all games begin in perceived space, where the boundaries, rules and outcomes are tacitly agreed among the participants before play begins. For example, two boys sit down to play *ISS Pro 2005*, but agonisingly for the two protagonists a puppy invades the arena of play. As Huizinga reminds us, animals don't wait for humans to tell them to play (Huizinga 1970, p. 19) and so perceiving that there is play afoot, gambols around the living room, tripping on wires, jumping up at the vibrant colours on the screen and champing at the hands of the players. The dog-as-pitch-invader is clearly a nuisance, but importantly

same handicaps apply to both sides, so there is an implicit agreement to play 'around' the intruder, even if the consequences of the action are unequal, such as the dog pulling out the jack-plug of the joypad from the console. The key is that the game is *perceived* to be fair, even if the consequences are not. If the game was taking place in a sunny room and there was a shaft of light across one side of the TV screen, but not the other, then clearly the game is perceived to be unfair. With these agreements in place, the perceived space of the game becomes trans-spatial as it shifts to occupy conceived space, manifested by the employment of 'house-rules' (such as not being able to pick Man Red or Chelsea) and independent arbitration, eventually culminating in hierarchical governing bodies, although the degree to which this occurs depends on the elasticity of the game. Additionally, even if all games eventually go through this transformation, perceived space remains crucial to the game "that's over the bar"; "that's off the post"; perceptions that are greatly influenced from which side one is on, indeed where one perceives from.

2.2 Conceived Space

Some games are more highly conceived than others, it is the case that a game such as football is more conducive to play in many different spaces, such as with a ball, on a computer or even with scrunched-up paper, than other games, such as swimming or rowing, which require more specialised equipment and arenas to play in. In this way, it is possible to see why some games are more 'successful' than others, in that they are able to be played in a variety of environments and subsequently, by a variety of methods. Chess is the paragon of this elasticity of games, and exists in a variety of spaces and found in the most peculiar places: the oversized pieces in a children's playground, the Formica of a school dinner table or the text message of a phone. Chess, in the vernacular of media scholars, is 'transmedial' (Jenkins 2006, p. 21; Juul, 2005, p. 48), enervated by a state of flux, it moves between spaces with little disruption. Perhaps the best example of a transmedial video game is *Tetris* which, due to its simplicity has been adapted to every platform since its release in 1985. However, Tetris crosses the boundary between gaming and life, by generating a so-called "Tetris *effect*" (Stickgold et al 2000) in those who use it for extended periods, thus entering into the symbolic, lived space of the individual gamer.

The usage of the term 'transmedia' is itself in a state of flux, and illuminates much about the way in which games, and more specifically, video games are discussed by the academy. Where Juul uses the term to describe how *games* are transposed from one medium to another, "sometimes with ease, sometimes with great difficulty" (Juul 2005, p. 48), Jenkins uses it to describe how *stories* are transposed, "[t]ransmedia storytelling is the art of world making" (Jenkins 2006, p. 21), noting that fictions appear in a plethora of media on a diverse

range of delivery technologies. At their kernel, both are correct, stories, through language are the touchstone of transmedia, which, as McLuhan (1962) reminds us have transformed from oral, print, to electronic media. Similarly, games, from draughts to chess to Tetris forever forage for new spaces to be played in, with Jenkins making the careful distinction between media and delivery technologies, with the former evolving over time and the latter "transient" (Jenkins 2006 p. 13, 283).

If all games begin in a perceived space, then if they are to thrive, they must settle in a conceived space, before transferring to other spaces. Clearly, there are differences in perception, therefore there is a requirement for independent intercession, (referee, umpire) but even in these circumstances there can be an appeal to digital space in order to clarify perception, when games move beyond the bounds of what can be perceived by the human eye. This is shown by the use of 'Hawkeye' in tennis which digitally replays the flight of the ball, similar to the replays seen in *Virtua Tennis 3*. However, those charged with introducing this technology to the conceived space (rules) of the game then cede to the spectators by making the playback an event within the game, replete with the hollering of the crowd as the ball is called in or out; the spaces of the game are fluid and complex, and it is rarely possible to locate the inside of the game in any one space, making them both transmedial and trans-spatial.

2.3 Lived Space

The mundane is an abundant source for the methodology of studying play and games. Goffman (1969) uses the everyday as a central trope to craft an understanding of micro-level interaction, where Lefebvre uses it to derive theory, going as far to say "daily life, the organic body of modern society, summons up its beyond in time and space" (Lefebvre 2005, p. 169). Video games are one of the finest examples of this transformation. Unable to be easily transported due to their reliance on bulky and sophisticated technologies, video games have been criticised in the past for promoting asocial, or solitary play (see e.g. Schroeder 1996; Goldstein 1994), although other reports refute the link. Yet it is their very location in lived space that seems to encourage sociality, with a recent report detailing that 81% of online gamers play with friends and family, 50% met in the flesh, and 10% developed physical relationships (Griffiths 2005). In tandem with Lefebvre, it is argued "with the advent of synthetic world technology, it is indeed possible to observe whole societies under controlled conditions" (Castronova 2006, p. 163). From The Sims to the massively multiplayer game World of Warcraft, lived spaces are found in the digital spaces of communication. Adding the tactility of play found with the Wii, or Philips' Ambx, the transformation of relationships is quixotic: when playing *Guitar Hero* who doesn't find themselves in the venue of a rock arena,

transplanting themselves into the persona of Axl Rose or Robert Plant? The ability to allow players to transform themselves is unique to games, and is wholly grasped by the video game:

"If I'm playing Guitar Hero on the expert setting, I know as a matter of certainty that I can't keep up with the sequence of notes streaming by [but] check me out – I'm amazing. And that's not arrogance. I don't take any credit for it. I can't [...]. Same as I can't take credit for the million biological and chemical wonders that my body sorts out for me day in, day out, and the gallons of maths and physics my brain processes to get me across a road safely." (Robertson 2007)

This is a fascinating observation of how a video game changes relationships not only with others, but with oneself, as Robertson continues, "games let you be a spectator in your own head" as if it is possible to step inside a specially reserved arena, a VIP pass that not only permits being a rock-star, but transcends innate and prescribed abilities, to go beyond what the human is capable of. Deleuze and Guattari elaborate "rates of flow on these lines produce phenomena of relative slowness or viscosity, or on the contrary, acceleration and rupture [and] constitutes an assemblage" (Deleuze & Guattari 2004, p. 4), witnessing cyberathletes in competition, fingers twitching on keys and the mouse, reaches this level of flow, where there is machinic assemblage and little or no distinction between human and machine. As a pure digital space of projection and distancing, it is unrivalled, but the enchantment of "being in the zone" is palpable.

2.4 Digital Space

Some games tend towards digital space more than others. Board games such as *Risk*, *Monopoly* and *Operation*, attempt to project the player to one space, (conceived as WW II, a money market, or an operating theatre) while maintaining distance through the symbology of the board and the counters, resulting in their becoming a digital space. Other board games, such as *Trivial Pursuit* and *Mastermind* do not attempt to project/distance the individual elsewhere outside of its own conceived space. Video games are digital by their very nature as they project and distance the player from the game, meaning that all games from the noughts and crosses of *Wargames*, to its logical conclusion, *Defcon* are digital, as Juul says, computers let us play "old games in new ways" (Juul 2005, p. 5). All of the games listed above have appeared in the digital space of the video game (*Operation* as *Trauma Centre*). This is but one of their common elements: all video games are digital, but not all games are; all video games are played in roughly the same manner (means of control, player input/output, AV output, microprocessor etc), but not all games are, it is not possible to play tennis with a badminton racquet, but they are both "racquet sports". It is possible to play chess and *Company of Heroes* on the same PC, yet not

possible to play Company of Heroes on a chess board, even if both are seen as strategy games. Elverdam and Aarseth (2007) provide a compelling model of what constitutes a game, yet there continue to be a spate of texts, chiefly from the US and UK, that read video games as texts.

This may be due to path dependency; the UK has an entire tourist industry devoted to telling stories, from Baker Street, to the Globe, to Stratford-upon-Avon: spaces are transformed to locate the visitor in that specific time and place, so that space is perceived in different ways. Scandinavia's equivalent is Legoland, with Lego meaning "play well" (ironically derived from the Latin "to read") in Danish, the emphasis is placed on play rather than narration. Lego is the archetype of a conceived space leading to play, yet each model built is unique. Video game designers also insist that their game is unique (Elverdam and Aarseth 2007, p. 4) and ludology attempts to understand this uniqueness and separateness from its surroundings (Juul 2005, p. 15) – as evidenced by the magic circle it is said to construct. However, if a spatial approach is applied to narratology and ludology, we see the inverse occurring. Ludology is rational, analysing the definable, *common* elements of games, such as rules, interface and structure – what makes a game a game. It is a scientific approach that is rooted in the conceived space of production – how does that brick go together with that brick to create a spaceship – making the common elements of games its building blocks, or *concepts*. Inversely, a textual approach looks to read what is presented, to interpret, to perceive the space of the text as a story that is waiting to be read. Looking for *differences* between spaceships, it is a *cultural* approach, examining what the product is as a whole rather than its building blocks. For instance, it is possible to read Iago's treachery of Othello in isolation, in its own space, but it becomes more significant when read in association with Shakespeare's other tragedies.

In this regard the rationale behind Murray's reading of Tetris, the so called "limit case" (Dovey & Kennedy, 2006) for narratology can be revealed. Tetris is seen as a metaphor for overworked American salary slaves, but it is argued by Eskelinen that this tells us nothing of the game, calling it "interpretive violence" as the game has no narrative and therefore no story. Yet this is unduly harsh, as a spatial approach instructs that it is due to how the video game is viewed, *perceived* as a symbol of clearing the desk and grimly awaiting the next task. The purpose of the conceived space of ludology, meanwhile will attempt to demonstrate what makes Tetris a game, how it has a hypnagogic effect on players and that in spite of its transmediality rivalling that of chess, can never be played outside of the digital space of the video game. Conceived space tells us how things work, drawing the lines on a court, or the rules of play. Perceived space understands how these things work, what the lines mean, or how the rules can be interpreted. Ludology and narratology, like mathematics and

English literature, are neither right or wrong, merely different approaches to the same problem: Why?

Conclusion

Classic and contemporary literature on gaming approaches the game as a separate space from the quotidian where preordained, special rules apply which allow the players to inhabit this space without influence and interference from other spaces. To attend to this approach is to both over-privilege the game and under-privilege trans-spatial aspects where subtle and rapid movement among spaces results in a state of flux which is paradoxically stable, such is its permanence. Applying this model to games demonstrates that there are a variety of spaces at work in the construction of the game and its subsequent processes. This is manifest in the two currently dominant discourses on video games. Ludology, following Huizinga, endorses the view that the game is unique and looks to view the video game in this way, when, if viewed from a spatial perspective, ludology searches for the conceived commonality of the game, even if the game is not seen as a separate space, but a plethora of spaces mixing and intermingling, sometimes in harmony and sometimes in opposition. In the postindustrial realm the game – especially the video game – is a product of the society of which it is part, hence in flux. The approach of studying the product, or culture of that product, sui generis is advanced by narratology and as a cultural approach it perceives the whole and not what makes that whole. Literary criticism does not examine individual letters as that is the province of the conceived space of semioticians and the same applies, to games conceived space is reserved for ludology, the 'science' of the game and perceived space for narratology, the 'fiction' of the game.

These very different perspectives have much to offer the study of video games, and, as a spatial approach shows, revised and new models can be of assistance in understanding games and their associated explanatory components.

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