

Videogames

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1. Introduction

Videogames are a fundamentally spatial medium. Whether playing a puzzle game on an iPhone or a Strategy game on a PC, upon picking up a controller one manipulates objects or moves through predesigned spatial locations and areas of some sort. However little work has been undertaken that seriously considers space as a basic element of what videogames are (exceptions include Nitsche 2009 and Borries et al 2007). While the terms space and place are often used when discussing different games there is almost no explicit reflection on what these terms might mean, or how videogame spaces are different or similar to other technological or mediated spaces. This is strange given the broad variety of disciplines that have studied games. As Malaby and Burke (2009) point out, videogames have been studied by writers from a range of perspectives, including; new media (Dovey and Kennedy 2006, Hjorth 2011), English literature (Aitkins 2003, 2007), game studies (Calleja 2011, Juul 2004) and cultural studies (Egenfeldt-Nielsen et al 2008) using a range of theoretical perspectives such as psychoanalysis (Spittle 2011), phenomenology (Crick 2011) and post colonial theory (Allen 2011). These perspectives have been complimented through a variety of qualitative and quantitative research methods including ethnography (Nardi 2010), video ethnography (Giddings 2009, Ash 2010), questionnaires (Quandt et al 2011) and interviews (Kelly 2004).

One possible reason for a marked absence of work on space and place in videogames is the abstract and difficult nature of these concepts themselves.

While geographers have long grappled with ideas of space and place, Malpas argues that: “spatial ideas and images are constantly in play, and yet what is at issue in the very idea of space and the spatial is almost never directly addressed” (2012 p1). Within work on videogames this difficulty is further compounded by the broad range of technologies that are gathered under the umbrella term ‘videogames’. Indeed when using the term ‘videogame’ one has to be aware that games can be played on a large array of different media including cell phones, dedicated videogame consoles, Personal Computers and arcade cabinets. On top of the fact that a broad variety of technologies can be called videogames, there is also a difficulty in clarifying how these technologies differ from other mediums. As Bolter and Grusin (1999) argue videogames actively ‘remediate’ older forms of media, drawing upon narrative techniques, event direction and camera framing from other media such as television and cinema (Poremba 2006, Ip 2008, Kirkland 2009).

Rather than offering a formal definition of what videogames are, for the purpose of this chapter, I argue that what is consistent among different games and platforms is that they form particular ‘possibility spaces’ of one kind or another. Following Bogost (2008), by possibility space I mean that part of what makes games unique are the ways in which they generate a space between the rules of the game set by the designers of the game and the contingency of player action as they explore and play within this space. These possibility spaces are therefore relative to and dependent on the hardware and software upon which games are created and played. An open world sandbox game such as Grand Theft Auto IV, which allows players to explore a whole city, has a very different possibility space from Plants vs Zombies, a puzzle game where users control the movement of plants on tiled squares in a single screen for example. In turn these ‘possibility spaces’ are what makes videogames different from other media such as television where the possibility for what takes place on the screen is completely predetermined by the director. To understand space and place in videogames one has to be sensitive to the ways in which factors such as game genre, age of hardware and game engine shape the possible spaces and places produced by and experienced in videogames.

Taking the idea of possibility space as its basis, this chapter examines videogames as a geographical form of media in order to provide a starting point for further theorisation and exploration of the spaces and places in videogames. Through a review of current literature on games from the disciplines of new media, cultural studies, games studies and geography the chapter argues that space in videogames can be conceptualised in three main ways; a space internal to the screen, a space of the body, or as an assemblage of body and screen. The chapter then discusses how videogame represent other places as well as producing fantasy places that serve as the site for new forms of social relationships and communities. In conclusion the chapter looks to four currently neglected areas that offer future research opportunities for media geographers interested in videogames.

2. Space and Videogames

a) Spaces of the screen

Within literatures on gaming, space has been understood in a number of ways. Accounts of space often invoke a distinction between the screen space of the image and the off screen space of the player and the player's body. A number of writers explicitly generate typologies to understand the different forms of screen space and the relation between them. Such forms of typology could be understood as part of a broader 'game ontology project' developed for "describing, analyzing, and studying games by defining a hierarchy of concepts abstracted from an analysis of many specific games" (Zagal 2008 p176 also see Zagal and Mateas 2010).

Typologies of videogame screen space concentrate on the different "spatial structures" (Wolf 1997 p53) and geometries possible within the onscreen space of the game. Calleja (2011) likens videogame screen space to a form of rollercoaster ride in which the player is channeled through pathways and spatial structures. In 'the medium of the videogame', Wolf (1997) identifies eleven basic geometries in games, including to name a few, no visual space;

all text based (exhibited in early text adventure games); one screen contained (such as the early game Space Wars); one screen contained with wrap around (such as Pac Man, where leaving the edge of one screen would result in Pac Man appearing from the opposite edge of the screen); scrolling on one axis (such as horizontally from left to right in the game Super Mario Bros); scrolling on two axes (such as an isometric perspective allowing movement up and down, left and right in the game Gauntlet); adjacent spaces displayed one at a time (meaning each screen acts as a separate room as in the game Spy vs Spy); layers of independently moving planes (meaning action scrolls on one axis while other planes appear to scroll in the background as in the game Thunderforce IV) and interactive three dimensional environments (such as Super Mario Galaxy). Today the majority of console videogames utilize three dimensional interactive environments, although many casual and puzzle games utilize one screen or scrolling on one axis structures. In any case, a geometric understanding of screen space assumes that space is a property of the screen and that different forms of space are dependent on how geometry and graphical lines are presented on the screen. Space is therefore a bounded property of the distance between the lines and polygons that delimit the edges of the game environment and serves to separate and partition how and where the player can move within this space through the joining of straight lines and polygons.

How these partitions are generated fundamentally affects the possibility for action within the game itself. As I have argued elsewhere (Ash 2010), the various aspects of videogame environments operate as inhibitors and disinhibitors for movement and action. In doing so these environments also work to inhibit and disinhibit capacities for creative and critical thought. In this case the specific architectural structure of games do not just operate as a container for action but also shape the narrative and temporal flow of how games play out. As Jenkins (2004) argues games can be understood as kinds of 'narrative architecture' in which the players actions are driven by the space itself (on narrative structure in videogames see Ip 2011, 2011b). In many games reaching certain points in space triggers events, narrative cut scenes and 'focalizations':

“Prince of Persia the sands of time can automatically enforce certain camera positions when the system considers such adjustments necessary; God of War adjusts the camera only to the position of the avatar and even excludes any player influence except for sharpshooting segments” (Nitsche 2009 p151).

As well as aiding and directing narrative, the very act of exploring and overcoming obstacles in the environment also creates a sense of reward for the player in and of itself. As Gazzard suggests in relation to the game Limbo:

“the reward of overcoming an obstacle along the path results in both rewards of environment and exploration being granted. The player is now able to continue exploring along the new paths of the game, and further obstacles are put in the way of the player-character to be overcome” (2011 no pagination).

The capacity of game environments to produce spatially complex structures as well as respond to players location within them helps to generate what Calleja (2011) calls ‘spatial involvement’ in the space of the image, whereby movement and navigation requires effort and skill. This effort and skill then produces a sense of exploration: “when a player plots a route through a geographical expanse and then navigates it, it is more likely that she will feel a sense of habitation within the game environment” (2011 p75).

What is interesting about these accounts is the way that the space of the image is framed as primarily Euclidian – understood as a distance between particular points and the ways in which this distance is sensed and experienced visually. Indeed as Ken Hillis puts it videogames are “world[s] composed of light” (1999 xxvi). As Hillis goes on to argue, there is a long history in the western world of thinking and conceptualizing space as primarily a visual phenomenon in which space extends outwards and beyond us: “visual space is the farthest removed from our bodily sense and covers the largest area experienced by a sense” (ibid p92). Typological accounts of videogame image space are so appealing precisely because they reiterate a (western) historical narrative that links the phenomenon of space with the

sense of sight. Videogames utilize the sense of sight to construct space using techniques of perspective, creating the appearance of a three dimensional world that extends beyond the confines of the frame of the screen and beyond the vanishing point of the image. Of course, such a conceptualisation of space is not the only one. As Ong (1982) argues, before the advent of writing space was primarily experienced as acoustic, based upon the sharing and circulation of oral history. Thinking about videogame space as a bodily experience, that utilizes all the bodily senses, opens up other ways for conceptualizing the space of the videogame itself.

b) Spaces of the body

Alongside enquiries into the screen space of videogame, a number of writers concern themselves with the non-diagetic space of the body that players inhabit while playing games. This is especially the case with the development of gesture based interfaces such as the Nintendo Wii, Microsoft Kinect and Playstation Move, all of which map extended bodily movement onto what is happening on the screen space of the image. A turn towards the body as central to the experience of videogame space could be considered a response to, and critique of, accounts of videogame space as part of an ephemeral virtual sphere or realm. As Lehdonvirta argues:

“even at the core of virtual space, physical space cannot be ignored. Guilds in *World of Warcraft* (Blizzard, 2004; from hereon, WoW) and corporations in *EVE Online* (CCP Games, 2003; from hereon, EVE) recruit members based on the continent and time zone in which they reside in. For WoW raiding guilds it is important that members can be online simultaneously for extended periods of time. For *EVE* alliances engaged in war over territory, it is vital that members are available to keep guard at all hours” (2010 no pagination).

Simply put, a dichotomy between virtual and real is unhelpful. Players need their bodies to experience and control the spaces and places of videogames, and these spaces and places are already tied into particular geographical and

material infrastructures, systems and contexts. However as Behrenshausen argues, until recently academics have “exhibit[ed] a near-exclusive preoccupation with video games’ relation to players’ embodied sense of sight at the expense of exploring other powerfully carnal modes of player–game engagement” (2007 p335-336). Turning towards the other bodily senses involved in game play, Crick argues for a phenomenological understanding of games:

“When I “enter” the virtual world of a FPS such as Call of Duty 4, my experience is not one of disembodied perception nor can my body be reducible to a mere set of eyeballs. For example, sometimes my heartbeat races or my body feels rushes of excitement and jolts during moments of intense combat with NPCs” (2011 p266).

From a phenomenological perspective, senses such as touch and hearing are as important as sight in understanding how players engage with videogames. However, as Kirkpatrick points out these senses are underdiscussed: “[it is]... curious that the details of...what each game feels like in the hand, so to speak—is so rarely a matter for reflection” (2008 p130). Thinking about the corporeal aspect of videogames is important as it opens new ways to think about the spatiality of videogames as a spatiality produced through the body. As Grodal (2000) argues “videogame experience is very much similar to such an everyday experience of learning and controlling by...[embodied]... repetitive rehearsal” (p148). Examples of such experience include learning the route through a new building or how to ride a bike. In videogames the control pad or interface device act as the conditions of possibility for this learning process. The space of the image is actively felt out through the combinations of buttons presses and the sensitivity of directional sticks that are unique to this or that game, which in turn are necessary to engage with the game itself. The space of the image is experienced in the body through the emotional and affective resonances the player has as they control their character or avatar on screen. Grodal suggests that such resonances can be stronger in videogames than other media because of the two-way feedback loop between

player and game, in which the player can respond to what is happening on screen. Whereas one can be scared by the actions of a character they see in a film, in a videogame this fear manifests itself in a direct response to what is happening in the game. For example, in *Uncharted* (2007) the player encounters a series of cursed humans that have become monsters. These monsters leap towards the player's avatar and swipe with claws that can quickly kill them, requiring the section of the game to be replayed. The player may experience fear here and this fear is linked to caring about whether their avatar lives or dies and the sensori-motor effort required to beat the cursed enemies. This care is qualitatively different in a film, whereby the outcome is out of the player's control. Taking this phenomenological perspective seriously allows us to recognize the key role all the bodily senses play in constructing an experience of space. It is only through the bodily senses that the flat image on screen is experienced as a space rather than an image (also see Gee 2008).

c) Space as assemblage of screen and body

Drawing upon ideas of the space of image and body, Nitsche argues that videogame play involves an assemblage of five different 'planes' of space';

“rule based space as defined by the mathematical rules that set, for example, physics, sounds AI and game-level architecture...*mediated space* as defined by the presentation, which is the space of the image plane and the use of this image including the cinematic form of presentation...*fictional space* that lives in the imagination, in other words, the space 'imagined' by players from their comprehension of the available images...*play space* meaning space of the play, which includes the player and the video game hardware; and...*social space* defined by interaction with others, meaning the game space of other players affected (e.g. in a multiplayer title)” (Nitsche 2009 p16 emphasis in original).

For Nitsche, these five different planes of space are not separate and work together to generate the overall space of the videogame. What is interesting about Nitsche's account is the way in which different types of space are invoked within his five plane model. From Nitsche's account at least four types of space are invoked: extended, metaphorical, visual and relational. For example the rule based space could be understood as contained within the hardware of the videogame console and the software which runs on this hardware. In this case the 'space' of the rules is an extended space, understood as the shape and size of the physical hardware and its capacity to execute code-based operations. The fictional space 'imagined by players' is a metaphorical space generated by the mind's eye and mediated space is linked to a visual image of space which is itself linked to particular understandings of vision. In contrast to this the social and play space of the videogame are relational; emerging from the particular arrangement and location of different players' bodies. Developing Nitsche's perspective one could understand the experiential space of videogames as an emergent assemblage of body and screen. As Taylor puts it:

'Games, and their play, are constituted by the interrelations between (to name just a few) technological systems and software (including the imagined player embedded in them), the material world (including our bodies at the keyboard), the online space of the game (if any), game genre, and its histories, the social worlds that infuse the game and situate us outside of it...' (2009: 332).

In this case space is not 'in' or 'behind' the screen and neither is it 'in' the body or mind. Rather it emerges from the relationship between body and screen, between the geometries that limit player action and how players corporeally and skillfully respond to these limitations using their embodied knowledge and sensori-motor skill. Arguments that point to the necessary assemblage of body and game are now being made by a variety of writers in different ways. Calleja suggests that players become 'incorporated' into the game environment: "Incorporation...operates on a double axis: the player incorporates (in the sense of internalizing or assimilating) the game

environment into consciousness while simultaneously being incorporated through the avatar into that environment” (2011 p169). Rush, using different language points towards the ‘embodied metaphor’ of play in which:

“the player is...sensitized to how the physical act of game playing crosses an order of reality to be expressed through its successful representation on-screen; this is sometimes experienced as a double consciousness, a sensation of both moving through game space while at the same time directing this movement from the outside (2011 p246).

In my own work (Ash 2009), I have developed the theme of assemblage to argue that the conjunction of body and screen creates worlds in which experiences of space and place are conceivable and possible for the player. Developing a post-phenomenological account of body, brain, screen and interface I argue that the space of the image and the capacity of the user to control this image generates a sense of locatedness in time and space through the activities and possibilities for movement that the user negotiates as they play. From this perspective there is no ‘imaginative’ space in the minds eye created from available images’. Instead, space emerges directly from the concerned structure and orientation of the body as it is involved in a particular task in the game. In this case, images are not interpreted or analyzed purely through their representational content but also resonate through the apparatus of the screen onto the body of the player, fleshing out and placing the player’s body in relation to the events on screen.

As such videogame ‘space’ can be understood as multiple and transitory, constantly being shifted and translated between different states and locations. When stored on a disk or server such worlds remain as numbers, code and operations, largely inaccessible to players. It is only when activated on the appropriate hardware that such worlds become experiential in a way that corresponds to the visual aspects of space that players may be familiar with. In this case, such experiential worlds don’t pre-exist their technical and bodily performance. However, this is not to say that the content of these worlds is

unimportant. Such content raises a number of issues regarding the politics and communal possibility of games that are addressed in the next section.

3. Place and Videogames

a) The politics of videogame place

If space in videogames is understood as meeting point of body and screen, then place can be understood as the content of the image on screen that organizes and shapes the tasks and activities of the user as the play. In other words, place refers to the specific location and sites that are created by designers in which action takes place. Just as the architectural layout of these sites is not just accidental, neither are the way these sites draw upon and create representations of people and places. As a number of writers are now highlighting, there is a clear representational politics to videogame images and how they shape the geographical imagination of users. This politics has two clearly identifiable strands: representations of conflict and militarism and representations of human identity.

Videogames have a long historical relationship with military technology and simulation. Patrick Crogan (2011) argues that videogames originate in computerized war gaming and planning and that military logics continue to underpin the development of videogames. As Der Derian (2009) suggests, the relationship between the military industrial complex and the videogame industry is not simply historical. Today this relationship is actively cultivated and encouraged by both parties, leading to what Der Derian (ibid) has dubbed 'the military-entertainment industrial complex' (also see Halter 2006, Witheford 2009). This complex manifests itself both explicitly and implicitly in how videogames represent other people and places.

For example, Power (2007) argues the US Army backed 'America's Army' is a clear instance of the ways in which videogames are used to attempt to manufacture consent for military intervention and encourage recruitment into the army. Shaw suggests that many videogames produce an 'oriental

aesthetics' that depict the orient as a "simplified Islamic world, in which cultural and ethical differences are flattened...[whereby]...The 'Middle East' becomes an anonymous topography of floating signifiers" (2011 p796). According to Shaw, the very places of these games help reinforce this otherness: "the military entertainment complex depicts Middle Eastern cities as in a state perpetual war. More than just maze-like and mystical, the Middle Eastern city is a site of conflict that must be brought under Western democratic order" (ibid p796).

Brock (2011) develops this problematic link between representation, place and identity in her work on Resident Evil 5, an action game set in Africa. She discusses the role of Sheva, a female sidekick who guides and backs the main character Chris through the games environments. As Brock puts it: "Sheva is the videogame equivalent of Pocahontas: a woman of color coerced into "guiding" White explorers across a foreign land that she is presumed to be familiar with because of her ethnic heritage...and in doing so serves to embody a logic of White control over the "Other" in the game" (2011 p440). Here the relationship between the identity and representation of characters and the places in which those characters inhabit become mixed:

"For RE5, the switch to the African continent...works as a setting to be cleansed and civilized, a role Africa has symbolized to the West for centuries. At no point are the Africans allowed to be anything other than savage; they are never seen within familiar Western contexts such as high-rise buildings, shopping centers, or at leisure" (ibid p443).

Other games such as Grand Theft Auto have been read in a similar way. Leonard (2009) argues that the city of San Andreas in Grand Theft Auto offers a ghetto-centric account of urban life which "deploys reactionary visions of communities of color through its narrative and virtual representations...[in which]...the ghetto...[is]...a war zone inhabited by Black gangstas that not only prey on Black residents but also on those White families living outside its virtual ghetto center." (p266). Such visions, he argues help rearticulate a politics of division, partition and separation based on racial difference.

But as Allen has argued, videogames do not have to generate representations of particular landscapes in order to be problematic. Rather than producing representations of a particular place, games like America's Army 3 create a fictional anyplace, which attempts to play down any relation to a real landscape or location. As Allen points out, the environments of America's Army are stripped of any identifiable cultural markers and signage in the game displays an invented language that cannot be related to a particular country or nation. Such abstraction is very powerful because it enables a mindset in which any nationality, race or nation could potentially be an enemy and primes the cultural imaginary of players with such assumptions. As Allen puts it:

“Nameless, elusive, and always just around the corner, the unreal enemy is not confined to any singular game or moment. He influences and precedes the production of real enemies of the United States Army; comprehending how this production of a cultural imaginary occurs is crucial in achieving any sort of knowledge regarding the real consequences of war and conflict” (2011 p55-56).

In this case, representations of place in videogames can have powerful effects in two ways. Firstly, through what and how they present the world based upon existing stereotypes and secondly through creating anonymous places that are scrubbed of these stereotypes.

Recent work is starting to paint a more complex picture of the implicit ways in which the places represented in videogames shape players understanding of the world, as well as recognizing that players do not necessarily accept these representations. Working with players of Grand Theft Auto 4, DeVane and Squire (2008) contest a narrative in which the games transmission of negative racial stereotypes encourages players to develop their own negative stereotypes. As DeVane and Squire put it:

“Far from simply reproducing discriminatory discourses regarding young Black men, Gamer 1 [a participant in the study] explicitly

recognizes and identifies or “calls out” the negative stereotypes present in the game: the notion of a Black man joining a gang and the gang members having certain character archetypes” (2008 p276).

Huntemann (2010) has conducted audience reception research with military war game players and argues that these games do not “inhibit critical engagement” (2010 p249) and “players...retained their skepticism about current military actions, questioning the motives, strategies, purported goals and likely success of US foreign policy and military intervention” (ibid). For both DeVane and Huntemann there is a recognition that place in videogames is:

“not a blank slate onto which players can reinscribe their cultural models at will. It is a designed artifact with affordances and constraints as well as possibilities and limitations. The player makes meaning in concert with the ideological world of the game through play, and play entails some form of acceptance of the semiotics of the game space, if only temporarily” (DeVane 2008 p281).

Taking into account the designed nature of videogames, alongside the multiple ways in which this space is interpreted, complicate simple accounts of games as sites of ‘othering’. While games such as Grand Theft Auto and Resident Evil 5 certainly have many flaws, this is not to say that the way they represent people and places is just accepted by those that play them.

Indeed, while the negative aspects of representation in videogames has been emphasized, a growing body of work is also pointing towards the ways in which the representations of videogame places can be actively utilized to challenge and complicate such negative narratives. Videogames can be actively used to question and interrogate how representations about people and places are constructed, rather than just utilized as a medium for disseminating and multiplying negative representations of particular states, regions or ethnics groups.

A number of games such as Bioshock, Mass Effect and Fallout 3 include morality systems that actively encourage players to weigh up how their actions will affect different groups or individuals within particular game worlds. While these may be fantasy worlds, Sicart (2005) argues that the complexity and ambiguity of the choices available to players, and the tangible impacts these choices have on the game world, encourages sustained ethical thought (also see Sicart 2009, Simkins and Steinkuehler 2008). In games like Fallout 3 for example, players moral actions in the game directly affect the places they can safely visit: “evil NPCs like slavers and raiders welcome the player if one is evil enough while those who oppose these factions respond by attacking and barring entry to their locations” (Schulzke 2009 no pagination). In this case, the environments of the games act as a moral landscape. Moral decision-making literally shapes player’s access to and relationship with particular places in game.

The encouragement of such reflection points to the capacity of videogames to cultivate a variety of critical thinking skills. A whole genre of so called ‘serious games’ capitalize on this capacity in order to encourage players to reflect on real world issues and problems. In ‘Darfur is Dying’, a web based browser game, the player controls a child traveling to a local well to collect water for their family, while trying to avoid being captured by the local Janjaweed militia. Bogost argues that games like Darfur is Dying “invite us to step into the smaller more uncomfortable shoes of the downtrodden rather than the larger, more well-heeled shoes of the powerful” (2011 p19). The main gameplay mechanic in Dafur is Dying revolve around the player trying to hide behind rocks and foliage from passing militia vehicles. In stark contrast with many other videogames, the player has no weapons or skills to fight back with. The barren nature of the landscape and the dispersal of foliage to hide behind in the environment, alongside the lack of abilities the player is given, actively work to create empathy between the player and those suffering in Darfur (also see Flanagan 2009).

As well as encouraging emotional states such as empathy, serious games can also work to inform and encourage resistance in players. For example, the

game 'Vagmundo, A Migrant's Tale' serves to critique the ways in which America discriminates and positions illegal immigrants from Mexico within US society as well as inform players about how they can help real world immigrants who have recently entered the US. Across a series of levels the player has to sneak across the border from Mexico and work as an unskilled laborer. Upon completing the last level of the game and gaining acceptance into American society, the player is then given a choice to either shun or help new immigrants. Choosing to help the new immigrants links the player to online information from immigrant charities. Shunning the immigrants results in a level where the player now sits on the US / Mexican border and shoots other immigrants as they attempt to enter. Taylor argues that in giving the player this choice:

“the boundaries of the computer game are opened up, and the user is encouraged to break beyond the confines of the gaming world with its circular logic and reinforcement of the system, to enter into real-life activism” (2011 p314).

These examples demonstrate that the places of videogames and the representations they draw upon and reiterate are not inherently negative. Videogames are a medium that can be powerfully used to critique existing representations of other people and places around the world. However, it must be said that for now at least, such games are in the minority. While games like Call of Duty and Grand Theft Auto generate millions of sales, games such as Dying in Darfur and Vagmundo are played by much smaller numbers of people and receive far less mainstream attention. These games also have very low production values and gameplay that is not as sophisticated or engaging as games made by large games design studios. These technical and budgetary limitations arguably inhibit the power of the messages they attempt to communicate. The possibilities of such titles should be celebrated, while recognizing their limited impact on mass culture.

b) The Communities of videogame place

As well as reiterating or challenging existing representations of place, videogames also produce forms of community that are shaped by, and local to, the places of particular games and game environments. This form of place based community is most obvious in massively multiplayer online role playing games (MMORPGs). In successful MMORPGs hundreds of thousands of players log onto a persistent online world, undertaking quests and communicating with other players through text and voice based interfaces. A variety of writers argue that MMORPGS such as World of Warcraft signal the generation of new forms of sociality and community (Fields and Kafai 2009, Lastowka 2009, 2009b, Pearce 2009, Bainbridge 2010, Williams 2007, Hemminger 2010). These forms of sociality and community are shaped by the mechanics and goals of the game as well as the fantasy places they represent (Humphreys 2009, Ruch 2009). For example, Chen (2008) explores practices of 'raiding' in World of Warcraft, where groups of players develop strong forms of camaraderie through meeting to battle high level monsters and complete difficult quests. Yee (2009) argues that the communal possibilities of these groups and the kinds of relationships that are developed are actively shaped by the affordances and restrictions of the games rules, which he terms their 'social architecture'. Raiding groups require players to closely coordinate their actions and use characters with varying abilities to complete their goals. The often intense and frantic nature of raiding also involves the development of shared technical vocabularies and slang which are local to the group in question. The example of raiding points to the ways in which the particular places of videogames enable and cultivate forms of community that are novel to the medium.

The places in which these raids take place also shape and help generate a sense of coherence and history for the user. Klastrup (2009) suggests that MMORPGs should be understood as generating fictional worlds, worlds that emerge from the relationship between their spatial structure and the history and lore that is communicated through the design and embellishment of these environments. For example World of Warcraft makes extensive use of ruins in its environments. As Krzywinska argues the: "cultural use of ruins...cast an aura of mystery and nostalgia. The ruins of once splendid temples and cities

act within the game (as in real life) as in memoriam signifiers of passed glory, representing in romanticized terms a lost object of desire” (2006 p389). Creating the appearance of a world steeped in history helps cement the coherence of MMORPGs as places with their own past which can encourage players to role-play as the avatars and characters they control (Nardi 2010, Williams et al 2011, Corneliussen et al 2008). MMORPGs encourage this form of role-play through the way in which players interact with the places in game. For example specific high value items are only available in certain regions in games and quests are only available from specific characters that reside in particular locations (Ducheneaut et al 2006).

While the social and spatial architecture of these games can encourage forms of altruism and teamwork the same architecture can be used to discipline and govern players actions. Developing more pointed language than Yee (2009), Kucklich argues that rather than simply operating as a form of social architecture, MMORPGS are ‘social factories’ in which players are laborers

“that appears to fulfill primarily an economic function but which also creates social and cultural capital, as well as forms of political organization, which in turn feed back into the business models of the providers of virtual worlds” (2009 p344).

In other words the social architecture that Yee describes as central to generating relationships with others in MMORPGs is actually a form of emotional labor used to keep players engaged in the game and thus willing to continue to pay a subscription fee in order to play. Silverman and Simon develop this theme of governance in examining practices of ‘power gaming’ among a self professed elite core of players in MMORPGs. These power gamers created ‘Dragon Kill points’ (DKP) a social system that exists outside of the actual game software, designed to fairly distribute rewards to groups who worked together to destroy difficult enemies (also see Malone 2009). Silverman and Simon argue that the development of these systems operate as a further form of self discipline on top of the rules of the game that attempt to engineer social relationships. As Silverman and Simon put it: “DKP is, in

fact... a disciplinary technology for producing gameplay as a form of rationalized labor” (2009 p364, also see Malaby 2006).

The communal potentials generated by the places of particular videogames should be understood as a double-edged sword. As the example of MMORPGs show, creating coherent places enables players to generate strong connections to the games they play and facilitates a variety of productive social and communal encounters. At the same time these encounters are always actively shaped by the companies that design these games in order to maximize player engagement, which in turn is motivated by a desire to generate profit. While it is too simplistic to think about MMORPGs as inherently ‘good’ or bad’ (on the construction of debates around the positive and negative aspects of MMORPGs see Kelly 2009, Golub and Lingley 2008, Lange 2011) recognizing how place is used in these games to help cultivate social and communal interaction is a good point from which to ask critical questions about control and power in these worlds.

4. Future media geographies of videogames

This chapter has examined various ways of conceptualizing videogame space and place. It has argued that what makes videogame spaces and place unique is the fact that, as digital simulations, videogames are possibility spaces – a space of potential opened up between the rules that limit players actions and the freedom that is available within this space. Ontologically the chapter has made the claim that ‘space’ itself in videogames emerges from the relationship between body, hardware, software and screen, which in turn creates a world in which space and place are conceivable. As such space and place in videogames don’t pre-exist their technical and bodily performance. The chapter has also suggested that videogames are productive of particular spaces and places through the ways in which environments are designed within this possibility space and the representations they draw upon to visually realize these spaces. Rather than a passive backdrop, these representations actively shape players experience and understanding of the world. In this

concluding section I want to point to four areas that may be of interest for future study by media geographers interested in the spaces and places of videogames.

First is to think more carefully and explicitly about the role of affect in videogames and particularly the ways in which videogames can be understood as forms of affective design. As the chapter has argued, what makes videogames a unique medium is the ways in which space is used to inhibit and enable movement and action by the player. Rather than just a container for action, videogame spaces and places are actively designed to anticipate, shape and respond to players actions in increasingly sophisticated and context dependent ways. How this is achieved is of great interest to thinking about the broader bodily politics of games. In particular the ways in which logics of movement are generated and emphasized by games and there possible governmental effects on broader processes of spatial awareness and decision making. In this case one has to recognize that these systems and environments do not simply translate, transport or hold affect within them. Instead affects emerge from the contingent relations between player and game. To get at these relations one needs to understand how the potential for affect is created and the technical systems that are used to transport this potential for affect to other times and places.

Second is to deal more explicitly with the complex relationships between the representational content of games and their nonrepresentational rules and forces. The chapter has examined a variety of work from post-colonial perspectives on military and war based games that argue such games produce militarized subjectivities and racialized forms of otherness. However many of these studies do not actually ask how people experience these representations and how they interpret them. There seems to be an assumption that if an image contains a specific representational content with a dominant meaning, then this dominant meaning is the only possible meaning that can be experienced. Thinking more closely about the relationship between the representational content of images and the forces and rules

which govern and shape how these images are experienced in videogames may bring more subtle and interesting understandings to the foreground.

Third is to think more explicitly about the complexities of interfaces. Just as maps, compasses and other instruments have been studied by geographers to think about the ways in which geographical knowledge is constructed, we can use interfaces to think more explicitly about the ways in which space and place in videogames is encountered, navigated and explored. In this case interfaces such as the graphical user interface on screen and the control pad used to play games are not just neutral mediums that are used to access some specific piece of information or content. Instead we can begin to think about the ways in which these interfaces shape players experiences and capacities to sense space and time.

Fourth is to think about the emergence of mobile and augmented reality games in relation to broader arguments around 'gamification' (Wark 2007) and space (on mobile gaming see Chan 2008, Hijorth 2010, Souza e Silva 2009 and a special issue of convergence). In augmented reality devices information is added to and augments users experience of the world. For example in the Nintendo 3DS console players can look at paper cards and see three dimensional characters standing on those cards when observing through the systems screen. In smart phone apps such as ZipRealty users can look through the screen and see information about houses available for sale overlaid on top of the environment through which they are traveling. In this case the interface logics of game environments bleed into extended spaces of the world through such devices. Here augmented reality devices bridge the divide between screen space and extended space and in doing so the spatial logics that shape and drive videogame design and play may shape users experience of extended space in cities, malls and other locations. Returning to the issue of affective design, one could think through the ways in which such devices could bring new forms of affective value into existence. The same logics of accumulation utilized in games to reward achievement could be used in AR devices to reward users of these apps to purchase goods from affiliated stores and so on. In this case the media geographies of games become

opened into much broader debates around the relationship between technology and space. As an emerging field of study, media geography is well placed to examine and report upon these processes at work.

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